CHAPTER 13
NATURAL SETTING ELEMENT

INTRODUCTION

Growth management, natural resource land conservation, and critical areas protection share problems related to governmental costs and efficiency. Sprawl and the unwise development of areas susceptible to natural hazards may lead to inefficient use of limited public resources, jeopardize environmental resource functions and values, subject persons and property to unsafe conditions, and affect the perceived quality of life. It is more costly to remedy the loss of critical areas than to conserve and protect them from loss or degradation. The inherent economic, social, and cultural values of critical areas should be considered in the development of strategies designed to conserve and protect lands.

In recognition of these common concerns, classification and designation of critical areas is intended to preclude land uses and development that are incompatible with critical areas. There are qualitative differences between critical areas: some are critical because of the hazard they represent to public health and safety; others because of the values they represent to the public welfare. In some cases, the risk posed to the public by use or development of a critical area can be mitigated or reduced through design; in other cases that risk cannot be effectively reduced except by avoidance of the critical area. Therefore, classification and designation of critical areas is intended to recognize the differences among these areas, and to develop appropriate regulatory and non-regulatory actions to respond to the differences.

Implementing development regulations that preclude uses and development that are incompatible with critical areas does not mean a prohibition of all uses or development. Rather, it means governing changes in land uses, new activities, or development that could adversely affect critical areas. Thus for each critical area, classification schemes should be defined and development regulations prepared that govern changes in land uses and new activities by prohibiting clearly inappropriate actions and restricting, allowing, or conditioning other activities as appropriate.

Critical area designations "overlay" other land use designations. That is, if two or more land use designations apply to a given parcel or portion of a parcel, both or all designations shall be made.

PURPOSE OF ELEMENT

The Natural Setting Element emphasizes the conservation and protection of our natural environment while preserving people's lifestyles and property. Grant County and the communities within it can and will continue to grow, but this growth must occur in a way that balances nature's needs with our own. By embracing a philosophy of sustainable land use management, the County can help prevent many environmental problems and avoid the unforeseen costs associated with correcting them.

The Natural Setting Element serves two purposes. The first is to clarify the relationship between the natural environment and our built environment. The second is to carry forward the intent of the Grant County Resource Lands and Critical Areas Development Ordinance No. 93-49-CC. The ordinance provides guidelines for the designation and classification of natural resource and critical area lands and establishes regulations for their protection. This element further discusses classification and identification of such areas. By providing substantive policies and criteria that can be considered during the review of a development proposal, this element assures there is a tool not only to meet the requirements of the GMA, but also to maintain these valuable resources that help define the

quality of life in Grant County. It is not the intent, however, to require existing uses to be subjected to these policies unless a change in land use is proposed in the form of a development application.

Environmental degradation or depletion of our natural resources negates some of the many reasons people wish to live here. Sensitive areas such as wetlands, open spaces, and fish and wildlife habitat contain much of the natural wealth valued by County residents. Other sensitive areas, such as land located outside fire districts or those prone to flooding are important because of the risk to lives and property posed by developing in them.

REQUIREMENTS OF OTHER PLANS

GMA Goals

The Washington State Growth Management Act (GMA) does not require a Natural Setting Element, but it does require that it address the following related goals:

(8) **Natural Resource Industries** – Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands and discourage incompatible uses.

(9) **Open Space and Recreation** – Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands, and discourage incompatible uses.

(10) **Environment** – Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.

(13) **Historic Preservation** – Identify and encourage the preservation of lands, sites, and structures that have historical or archeological significance.

Critical Areas

The GMA also requires that local jurisdictions designate five critical areas and adopt development regulations that protect them. These critical areas are:

- Wetlands;
- Aquifer recharge areas;
- Fish and wildlife habitat;
- Frequently flooded areas; and
- Geologically hazardous areas.

WAC Chapter 365-190 identifies "Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands and Critical Areas" (hereafter referred to as *Minimum Guidelines*). Grant County is required to consider the definitions found in the Minimum Guidelines when designating environmentally sensitive areas. Definitions of each critical area according to the Minimum Guidelines, including discussion of their functions and importance, are included in this Chapter.

Grant County Resource Lands and Critical Areas Development Ordinance

Grant County adopted Grant County Resource Lands and Critical Areas Development Ordinance No. 93-49-CC on May 25, 1993, in compliance with the GMA.

The Ordinance furthered the County's objectives to promote the public health, safety and general welfare by adopting provisions designed to:

1. Protect human life and health;

2. Further the public's interest in the conservation and wise use of our lands;

3. Assure the long term conservation of resource lands;

4. Preclude land uses and developments which are incompatible with critical areas;

5. Classify and designate critical areas and resource lands; and

6. To develop appropriate regulatory and non-regulatory actions in response.

The Ordinance applies to all real property within the corporate limits of Grant County. Activities on lands under federal, state, or tribal ownership may be exempt from the requirements of the Ordinance.

MAJOR ISSUES

Critical Area Protection

The administration and enforcement of critical area protection regulations will be a recurrent issue in Grant County for some time to come. Often just talking about the protection of things like habitat and water quality protection will anger people who already believe that government regulation is too restrictive. Now that state law and local ordinance require critical area protection, education efforts on the importance of critical area protection may be the best way to address public resentment.

Water Supply

As with much of the West, water in Grant County serves competing, and often conflicting, uses. Securing certainty in our water supply will be a major issue over the 20-year planning period. Reliable access to water is necessary for direct human uses like household, agricultural, commercial, and industrial operations, and for indirect human needs such as recreation. Today, irrigated agriculture is the biggest user of water. But recently the needs of other surface water uses, particularly those dealing with the protection and restoration of anadromous fish runs, have been fiercely pursued at all levels of government.

Anadromous fish are those species, like salmon and steelhead, which are born in fresh water and eventually migrate out to sea where they spend a large part of their life. Ultimately, they attempt to return to the fresh water stream in which they were hatched in order to reproduce.

The Bureau of Reclamation Columbia Basin Project (the "Project") currently serves more than 550,000 acres of desert that have been transformed into some of the most productive agricultural land in the country. The Columbia Basin Project has fueled extensive growth in Grant County's agriculture industry, which has led to growth in complementary industries such as food processing, agricultural services, warehousing and trucking. In terms of farm-gate production value, Grant County is the second largest (behind Yakima) in the state. The overall plan for the Project calls for a total of about 1,095,000 acres of irrigated land. Due primarily to competing interest for available water to support poor salmon runs, the promise of the second phase of the Project is in jeopardy.

In February 1991, the U.S. Fish and Wildlife Service, the Washington Department of Fish & Wildlife, the three irrigation districts that make up the Project, and the U.S. Bureau of Reclamation developed a Fish and Wildlife Plan to address the potential impacts of the proposed expansion of the Project.

Steelhead

In November, 1991, the National Marine Fisheries Service listed the Snake River spring/summer chinook and the Snake River fall chinook as threatened. The formal listing triggered the initiation of a recovery plan and federal agency consultation on the effects of actions on the listed salmon. This listing required the Bureau of Reclamation and other cooperating agencies in the operation of the Columbia River Power System to ensure their actions are not likely to jeopardize the continued existence of the listed species.

In 1998, the Snake River steelhead, Snake River sockeye and Upper Columbia River steelhead were listed. Over the next few years, more than a dozen additional species are anticipated to be listed under the Endangered Species Act. In September 1998, a report was issued that supported removing four dams on the lower Snake River to restore spring chinook salmon runs. The accuracy and reliability of that report has not been authenticated, and is disputed by many Grant County residents and agencies alike.

The Northwest Power Planning Council (NWPPC) is required by law to protect, mitigate, and enhance fish and wildlife affected by dams in the Columbia River Basin while also assuring the region an adequate, efficient, economical, environmentally benign, and reliable power supply. In response to the proposal to remove dams, the NWPPC has not yet taken a position on dam-breaching as of October 1998. The NWPPC implemented the largest fish and wildlife protection plan in the nation in late 1998, and intends to work closely with state and federal fish and wildlife agencies and Native American tribes to develop a decision-making framework to assist in the difficult decisions that lie ahead (J. Etchart, Chairman, Northwest Power Planning Council, October 1, 1998).

With the listing of several species as endangered and the possibility of several other listings, the competition for water uses is likely to escalate. Along with the water needs of anadromous fish habitat, the demand for water to serve our growing urban areas will increase based on expected growth and agricultural needs. The proposal to remove dams on the Snake River, while not directly affecting water supply to the Columbia Basin Project, is certainly worrisome to many.

Based on 73 years of record (1913-1986), the average annual flow of the Columbia River at Grand Coulee Dam is 79.6 million acre-feet. The net diversion from the Columbia River at Grand Coulee Dam to serve the Columbia Basin Project is about 1,500,000 acre-feet. Thus the total diversion is less than 2.0 percent of average annual flow. Some of the diverted irrigation water that is in excess of the consumptive needs of crop production eventually returns to the Columbia River between Rock Island and McNary Dams. Portions of the irrigation return flows are captured in the Potholes Reservoir system, where they are used to irrigate lands served by the Potholes system or reduce the need to supplement the Potholes Reservoir by feeding water directly from the Columbia River. Total return flows are approximately 550,000 acre-feet. (*Draft Environmental Impact Statement, Continued Development of the Columbia Basin Project*, Bureau of Reclamation, Pacific Northwest Region, September 1989.)

If we are to sustain growth, every resident and jurisdiction within Grant County must meet the ongoing challenge of protecting and managing our water resources, and resisting proposals for elimination of the public investment we have made in reclamation and flood control projects and in economic, environmentally benign electrical power production.

Water Quality

The water quality of our streams, lakes, and ground water influences the domestic, economic, recreational, natural and manmade environments of Grant County. We all need clean water for daily use in our homes. Residents and tourists alike use our lakes and streams extensively for recreational activities such as boating, fishing, and swimming. Many industries require clean water for manufacturing processes.

In many areas of Washington State, clean water has been taken for granted. As growth and development have increased, so have the problems associated with maintaining water quality. From industry to the individual, and commercial business to agriculture, each of us contributes in some way to reduced water quality. From this perspective, each of us must work towards its protection.

In Grant County, the impact to water quality is predominantly influenced by the Columbia Basin Project. Those impacts have been largely beneficial ones. Prior to implementation of the Project, many water bodies in the County were

seasonally fed, becoming stagnant pools during dry summer months. Development of the Project enhanced such water bodies, created significant amounts of fish and wildlife habitat, and enhanced water quality.

Air Quality

We all contribute to air quality problems. Our daily lives are filled with single person car trips, smoke from woodstoves, and the burning of brush and yard wastes. More traffic on unpaved roads increases dust for residents and agricultural operations. Commercial and industrial operations also contribute to air quality problems, but the primary source of air pollution in Grant County is motor vehicles. Although state and federal laws regulate some emissions, air pollution will increase as the population grows. Our challenge is to maintain or improve air quality as growth continues, particularly in urban areas.

EXISTING CONDITIONS

Climate

The Big Bend Area of the Columbia Plateau is a semi-arid region with four distinct seasons. This temperate climate has the potential for supporting a large variety of crops. Until the Columbia Basin Irrigation Project was conceived and constructed, very little could be grown in the parched land that receives only 8 inches to 11 inches of precipitation annually in the western and southern part, with only 1.0 inches to 1.5 inches of this precipitation coming in the months of June through August.

In general, the climate in Grant County is mild and dry. In winter, the maritime influence is strong because of the prevailing westerlies off the Pacific Ocean. The Rocky Mountains shield the area from most of the arctic air masses that move down from Canada into the Great Plains and eastern United States. During the summer, the temperate westerlies are blocked by thermals, so that summer days are typically hot and dry. Extreme temperatures commonly exceeding 100° F in summer and reaching below 0° F in winter are experienced. The difference between daily high and low temperatures varies from as little as 15° F in January to as much as 40° in July. According to U.S. National Oceanic and Atmospheric Administration records, the dry air results in a rapid temperature fall in the evening, particularly noticeable in the early fall and late spring. The frost-free season is 140 to 160 days in length from late April to late September.

Topography

The topography in Grant County is variable, ranging from low rolling hills in the north to smooth, south-sloping plains in the south. The plains and hills are dissected by channeled scablands and coulees. Ground surface elevation ranges from 380 feet Mean Sea Level (MSL) at the south end of the County along the Columbia River to about 2,880 feet MSL at Monument Hill.

The Grand Coulee, which contains Banks Lake, Park Lake, Blue Lake, Lake Lenore and Soap Lake, dissects the hills along the northwestern County line. The Columbia River flows along the southwestern and south boundaries of the County.

The Beezley Hills, which are west of Ephrata and north of Quincy, trend generally east-west along the transition between the rolling hills and plains. The Frenchman Hills separate the plains south of Quincy and Royal Slope. Crab Creek lies between Royal Slope and the Saddle Mountains to the south. Wahluke Slope is bounded by the Saddle Mountains and the Columbia River. Evergreen Ridge, Babcock Bench and Babcock Ridge trend generally north-south along the east side of the Columbia River.

Soils

The U.S. Soil Conservation Service has generally characterized the surficial soils in Grant County as very shallow to very deep and well-drained to excessively drained. These soils are formed in glacial outwash, loess, lake deposits, and alluvial and colluvial deposits from

rivers, streams, and surface water runoff. Soils on the outwash range from sandy loams to silty loams and generally are gravelly in profile. The glacial outwash and the alluvium along existing streams such as Crab Creek yield large quantities of water. Soils on lake beds are compacted, stratified silts. The loess and other windblown deposits range from sandy to silty. These soils erode easily.

Hydrology

Surface Water

Grant County is within the Columbia River Basin. The Washington State Department of Natural Resources (DNR) reports that this watershed area is classified as agricultural and is not subdivided into drainage basins.

Surface water systems in the County are dominated by the primary feature of the Columbia River, which is the primary source of water. Banks Lake, Billy Clapp Lake, and Potholes Reservoir all are regulated reservoirs containing waters primarily drawn from irrigation diversions from the Columbia River. Moses Lake also receives most of its water from the Columbia River in the form of irrigation return flows, canal water, and groundwater seepage. It also receives some water from Crab Creek, a small tributary with its headwaters west of Spokane, and Rocky Ford Creek, a spring-fed creek that originates south of Soap Lake. Flows in Rocky Ford Creek increased after irrigation began in the Columbia Basin (Bureau of Reclamation).

In addition to these primary surface water systems, the County contains many canals, ditches, and wasteways that carry irrigation water, as well as creeks and streams that have resulted from irrigation-related groundwater recharge and surface water runoff. There are also seep lakes, small ponds, and detention basins resulting from irrigation. Major canals, ditches, wasteways and other surface waters are show in Figure 5RE-2.

Portions of Grant County are part of the Columbia Basin Project managed by the Bureau of Reclamation of the U.S. Department of Interior. The Columbia Basin Project area is divided into five irrigation districts: Quincy Columbia Basin, Moses Lake, South Columbia Basin, Black Sands and East Columbia.

Water Quality: Water quality within the Columbia Basin Project has been influenced significantly by the introduction of irrigation waters to the area. Streams that had been intermittent prior to the Columbia Basin Project have become and are becoming flowing streams on a year-round basis. Irrigation return waters, subsurface and surface agricultural drainage comprise the flows of waterways within the project area and have created year-round reservoirs and lakes, such as the Potholes Reservoir and Banks Lake, which provide habitat for fish and wildlife. The flows created by the Columbia Basin Project also enhance the shallow regional aquifers, thereby supporting sustainable resource development.

The Columbia River is dammed at several locations to create flood storage and/or for power generation. These reservoirs are used to augment summer flows for irrigation, control flows for instream habitat, and reduce flooding during winter storms and spring snowmelt. However, the development of power production and their accompanying impoundments on the Columbia River have resulted in quality changes in the river waters.

Water quality standards for Washington State are established in WAC 173-201. The objectives of the WAC are the protection of beneficial uses of these waters, including drinking water supplies, irrigation, stock watering, fish and wildlife habitat, food processing, and recreation. All surface waters in the state are classified according to water quality monitoring results into the following categories:

- Class AA (extraordinary),
- Class A (excellent),
- Class B (good),
- Class C (fair), or
- Lake Class

Grant County water systems are classified as follows:

- Columbia River – Class A;
- Crab Creek – Class B;
- Banks Lake – Lake;
- Moses Lake – Lake;
- Billy Clapp – Lake; and
- Potholes Reservoir – Lake.

Crab Creek: Crab Creek is classified as B on the basis of elevated temperature and pH measurements. Class B streams should not be used as a source of domestic water supply nor for primary contact recreation, such as swimming or water skiing. Crab Creek is on the Washington Department of Ecology's proposed list of water quality limited streams.

Moses Lake: Moses Lake is a large, shallow lake. Crab Creek drains about 85 percent of the Moses Lake drainage area. Moses Lake serves as a supply route for feed water passing from the East Low Canal south to Potholes Reservoir, which supplies irrigation water to the lower Columbia Basin Project lands. Water Quality in Moses Lake is of concern to local residents as well as downstream users of Potholes Reservoir waters. The lake has been classified as "hyper-eutrophic", which indicates that it is receiving excessive nutrient loading. The primary water quality problem is overproduction of algae, particularly blue-green algae, which form unsightly, floating mats during the summer recreation season.

Nitrogen and phosphorous are reported to be the major nutrients causing overproduction of algae, the principal sources being irrigation return water via Crab Creek, and groundwater seeps, septic tank leachate, and recycling from bottom sediments (Bureau of Reclamation).

Dilution water from the East Low Canal has provided some relief from nuisance algae blooms by lowering water temperature and by flushing them out of the lake. Improvements in irrigation techniques and a detention pond constructed on Rocky Ford Creek have reduced nutrient loading in recent years.

Potholes Reservoir: Potholes Reservoir lies immediately downstream of Moses Lake in the Crab Creek basin. Potholes Reservoir was built as part of the Columbia Basin Project to capture irrigation return flows, migrating groundwater, and natural flows in the Crab Creek basin for distribution through Potholes Canal to the southern part of the Columbia Basin Project. Water flows into Potholes Reservoir from Moses Lake through the Crab Creek channel on the north side, from Lind Coulee wasteway on the east side, and from Winchester and Frenchman wasteways on the west side (see Figure 5RE-2). The upper portion of Potholes Reservoir inundates an extensive area covered by sand dunes, creating a complex shoreline and hundreds of islands. Comparison of water quality at the head of Potholes canal with that of inflows indicates considerable removal of nutrients, bacteria, and suspended solids by Potholes Reservoir (Bureau of Reclamation).

Soap Lake: Soap Lake is recognized worldwide for its unique mineral content and therapeutic value. Soap Lake represents an economic, cultural, recreational, geologic, and environmental benefit to the region. Of concern is potential dilution and pollution of the waters of the lake as well as recreational use that may be incompatible with its therapeutic use. This Plan recognizes the unique functions and values that Soap Lake provides, and intends for the goals and policies of this Natural Setting Element of pertaining to water resources and shoreline management to protect of this important aquatic resource.

Ground Water

Groundwater is water located within the subsurface of the earth that supplies, or is capable of supplying, water to wells and springs. Groundwater is typically located in porous material such as fractured rock or the weathering products of rock, such as sand. Groundwater is used for drinking water (treated and untreated), irrigation, livestock watering, and manufacturing processes. Ground water is the major source of drinking water in Grant County.

Since 1952, water resources of the County have been a complex mixture of naturally occurring State groundwater and artificially stored irrigation water introduced by the Bureau of Reclamation's Columbia Basin Project. The Project pumps water from Lake Roosevelt behind Grand Coulee Dam to Banks Lake and then distributes it through a series of canals to semi-arid land within Grant, Adams, and Franklin Counties. A detailed presentation of the hydrologic interaction between State and Columbia Basin Project surface and groundwater is included in *Quincy Groundwater Subarea Plan Coordinated Water System Plan* (Economic and Engineering Services, Inc., August 1982).

The comingled status of artificially stored Columbia Basin Project irrigation water with naturally occurring State groundwater has precipitated the development of several intergovernmental agreements and the establishment of regulations administering the groundwaters of much of the County. Management regulations were adopted in 1975 to control artificially stored groundwater. Management of groundwater, including withdrawals and permitting systems, is currently regulated by the Department of Ecology.

Historical records indicate that introducing surface irrigation water to the Columbia Basin's arid lands has significantly affected the groundwater environment beneath the Columbia Basin Project area. In irrigated areas, near surface water levels have increased, whereas water levels have declined in adjacent areas. Industrial development and population growth resulting from the irrigation development have produced wastewater flows of increased magnitudes. The increased production of feed has increased the livestock population significantly and the attendant wastewater problem.

Regional (Confined) Flow: Regional groundwater flow in the County is generally southwest toward the Snake and Columbia Rivers. The major aquifer systems underlying Grant County are the Overburden, Saddle Mountain, Wanapum and Grand Ronde hydrologic units. The Overburden unit is in recent unconsolidated deposits. The Saddle Mountain, Wanapum, and Grand Ronde units are in the Columbia River Basalts. Ground water quality in these systems is good and considered suitable for most uses.

Local (Unconfined) Flow: Large areas of shallow, unconfined groundwater are common in Grant County. Prior to development of the Columbia Basin Project, the water table was deep, and unconsolidated sediments that overlaid the basalts were generally unsaturated except in localized areas near water bodies. Irrigation caused a dramatic water table rise, saturating the unconsolidated sediments in many areas west of the East Low Canal. Water level increases of over 200 feet were reported in parts of the Quincy Basin (Bureau of Reclamation).

There are four principal groundwater regions in Grant County:

- Quincy Basin;
- Pasco Basin;
- Crab Creek Basin; and
- East High/East Low Area.

The basins are indicated on Figure 5RE-2 in the Resource Lands Sub-element of this Comprehensive Plan.

Quincy Basin: The Quincy Basin subarea is characterized by thick sequences of unconsolidated sediments and relatively high water tables in the unconfined aquifer. Because infiltration rates are generally high, surface water runoff is minimized, which allows significant volumes of water to percolate to the groundwater system. Prior to the introduction of irrigation to the subarea, depth to groundwater was generally greater than 100 feet. After Project water was supplied to the area, water levels rose nearly 30 feet per year in some areas. Water levels continued to rise for about 10 years after the onset of irrigation, In the early 1960s, water levels stabilized when the water table intersected surface drainage channels (Bureau of Reclamation).

Pasco Basin: The Pasco Basin is similar to the Quincy Basin in terms of soil types, geology and groundwater characteristics. Because irrigation service to this basin was limited, the Pasco Basin did not undergo drastic water level changes, and rising tables are largely controlled by drainage to the Columbia River and its side canyons.

Crab Creek Basin: This basin includes the Royal Slope irrigation blocks and lower Crab Creek. Soil types are highly variable, with mainly fine-grained silts in the Royal Slope area.

East High/East Low Area: This area covers the eastern portion of the County. Topography is broad rolling hills dissected by east-west trending coulees eroded into the basalt. Hydrogeology is characterized by a deep water table and lack of extensive shallow, unconfined aquifers. Loess deposits blanket the basalt bedrock and generally are above the water table, except those adjacent to the East Low Canal and Crab Creek. These loess soils are typically a very low-yield aquifer, and are particularly suited for dryland farming because of their high moisture-holding capacity. Their low permeability makes them susceptible to erosion from surface water runoff.

Groundwater Quality: A 1986 USGS study on Columbia Basin water quality gives a good overview of groundwater quality within Grant County and the Columbia Basin Project. Groundwater from 188 wells was analyzed for pH, specific conductance, fecal coliform bacteria, dissolved solids, iron, manganese, and nitrates. Results are presented in *Draft Environmental Impact Statement, Continued Development of the Columbia Basin Project* (Bureau of Reclamation).

Elevated levels of dissolved oxygen, calcium, magnesium, sulfate, chloride, sodium bicarbonate and/or nitrogen have been measured in shallow areas of the Saddle Mountains and Wanapum units beneath irrigated areas. High nitrate concentrations have been observed in the Columbia Basin Project area, suggesting that water quality may be degraded by agricultural fertilizers and practices. Nitrate concentrations varied greatly over the project area. Generally, deep aquifer wells exhibited nitrate concentrations less than 1.0 mg/l, while samples collected in the Quincy Basin, Crab Creek, and the Pasco Basin areas had nitrate concentrations above 5 mg/l. The higher nitrate levels in these areas suggest that infiltration rates are high enough to allow water from cultivated fields to reach groundwater before sufficient biological dentrification (transformation of nitrate to nitrogen gas) has occurred (Bureau of Reclamation).

Groundwater Supply: The comingled status of public groundwaters and artificially stored groundwater from the Columbia Basin Project impacts the availability of water resources required for the future growth of public water systems within the County. The complex legal, political, and regulatory relationships which control the availability and administration of groundwater precludes the likelihood of public water systems to individually address these regional resource issues in a successful manner. Ensuring availability of water for future growth will require evaluation of capacity of groundwater available and obtaining water rights for their use. Anticipated growth and water use projections were made for public water systems in the Quincy Basin in 1982 (Economic and Engineering Services, Inc.), based on an evaluation of historical water consumption, anticipated growth, and a review of existing water rights authorized by Ecology. The analysis generally indicated that water rights in many areas would be exceeded on an annual and instantaneous basis near 1990. The CWSP identified inadequacies in water rights for several of the cities in the Subarea, including Quincy, Ephrata, Warden, and Moses Lake. That prediction has been confirmed in recent years

Many water rights issues remain valid today. Grant County and its utilities recently initiated an update of the 1982 Coordinated Water System Plan for the Quincy Groundwater Subarea. The results of that study are expected late in 1999. Once complete, the results should be incorporated into the first update of this Comprehensive Plan.

Columbia Basin Ground Water Management Area: Adams, Franklin and Grant counties petitioned the Washington State Department of Ecology in 1997 to form the Columbia Basin Ground Water Management Area (GWMA). Ecology signed the order creating the Columbia Basin GWMA on February 4, 1998.

Funded by local, state and federal sources, the GWMA program will consist of water monitoring and characterization, public information and education, and implementation and research. A series of ground water advisory committees have been formed to oversee the work program and make program recommendations to an executive committee. The executive committee will review the recommendations of the various committees and present a final set of recommendations to the local conservation districts and the Boards of County Commissioners of each county, who report to Ecology.

Six agencies have also agreed to participate in the program and in the development and implementation of locally driven solutions to address ground water quality issues in areas of documented nitrate concern. Local agricultural industry representatives are also supportive of the GWMA program. A final report is expected in 2000. Once complete, the results should be incorporated into the next update of this Comprehensive Plan.

Water Resource Inventory Area: Grant County is currently working with other local jurisdictions and a consultant to prepare limiting factors analysis and other studies for three Water Resource Inventory Areas (WRIAs) covering portions of Grant County.

Air

One of mankind's most basic needs is the air we breathe. Polluted air contributes to a variety of health problems and consumes millions of dollars in medical costs each year. Polluted air also obscures visibility, creates unpleasant odors, and adversely affects animal and plant life. The attractiveness and livability of Grant County is directly related to the quality of our air. Air quality in the County is generally good, because of the lack of industrial development and the low population density.

The Washington State Department of Ecology and the U.S. Environmental Protection Agency (EPA), who monitor air quality, have designated Grant County as an area currently in attainment for all standards. However, Grant County does not have permanent or mobile monitoring stations.

The one pollutant of concern in the County is Total Suspended Particulates. Particulate sources include industrial point sources, such as manufacturing plants, and area sources, such as dirt roads and plowed fields. Because of the general lack of industrial sources, area sources are of greater importance due to the prevalence of wind erosion. Wind erosion is greatest during the spring and fall, when high winds and dry soil conditions create dust storms of varying severity. The severity of dust storms is exacerbated by dryland agricultural practices, which expose the soil during spring cultivation and fall harvesting periods.

Another source of particulate matter is from the agricultural practice of burning field residue following harvest, particularly for commercial grasses. These open burning procedures produce large amounts of smoke that contains high levels of particulate matter and gases that are harmful to human health. The burning season is about a month in duration in late August and September. Although considerable smoke management technique is used to direct smoke from population centers, emissions are not reduced.

In response to Legislative action, Ecology adopted a rule in March 1996 to reduce grass seed field burning. The intent of the rule is to replace burning with mechanical residue management.

Vegetation

The majority of Grant County is native rangeland characterized by steppe vegetation comprised mainly of grasses, forbs, and shrubs. The *Artemisia/Agropyron* (sagebrush/wheat

grass) association forms the climax species for this zone. The vegetation can be divided into four layers: 1) a shrub layer dominated by sage brush, 2) a perennial grass layer with blue-bunch wheatgrass and needle and thread grass typically occurring in dense tufts, 3) a mixed herbaceous layer of prostrate plants such as cheat grass and 4) a surface crust of lichens and mosses.

The *Artemisia/Agropyron* association is the most extensive association of the steppe vegetation of the eastern Columbia Basin. Very similar communities are also found in British Columbia, Central Oregon, Southern Idaho, and Montana. Low precipitation levels serve to maintain this association and generally prevent growth of trees except along water courses and in low, wet depressions.

In addition, along the main stem of the Columbia River and its adjacent stream corridors are vegetative belts that contain various shrubs, trees and grasses. Water-loving trees like black cottonwood, aspen and alder are found along many stream banks. These well vegetated stream-side riparian zones provide substantial food and shelter for wildlife. Many aquatic organisms feed on leaf litter and woody debris that collect in these streams. Insects and other invertebrates falling from these plants provide an important source of food for many fish species. Birds and land animals depend on stream-side vegetated areas for food, thermal protection, visual cover and as a migratory corridor to other parts of their habitat. It is the sum of these parts, from microorganism to migrating fish that make habitat vibrant and healthy.

CRITICAL AREAS & RESOURCE LANDS

Protection Standards, Land Use & Notification

Under statutory authorization of RCW 36.70A.060, Grant County adopted Grant County Resource Lands and Critical Areas Development Ordinance No. 93-49-CC on May 25, 1993, in compliance with the GMA. The Ordinance addresses agricultural, mineral and forest resources; cultural resources; and critical areas of the County. The Ordinance may:

- identify specific protection standards, including buffers, setbacks, and mitigation, for critical areas;
- identify specific land use restrictions or requirements, including requirements for primary use, accessory use, and incidental use for critical areas; and/or
- require that notification be placed on property title and/or land division documents or for regulated activities for properties within an area identified as critical areas.

Identification and Classification

Critical areas shall be identified and classified in accordance with the requirements of Grant County Resource Lands and Critical Areas Development Ordinance using best available science.

Maps and References

The Grant County Current Planning Department maintains a series of data maps containing the best available graphic depiction of critical areas in Grant County for the purpose of administering its Resource Lands and Critical Areas Development Ordinance. These maps are for information and illustrative purposes only and are not regulatory in nature.

The maps are intended to alert the development community, appraisers, and current or prospective owners of a potential encounter with a use or development limiting factor based on the natural systems present. The indication of the presence of a critical area on the maps is sufficient cause for the County to request a site-specific analysis for the critical areas identified prior to acceptance of a development application as being complete and ready for processing.

The maps are to be used as a general guide to the location and extent of critical areas. Critical areas indicated on the maps are presumed to exist in the locations shown. The exact location and extent of critical areas shall be determined by the applicant as a result of field investigations performed by qualified professionals using the definitions found in the Resource Lands and Critical Areas Development Ordinance.

Resource Lands

Agricultural, Mineral and Forest Resources are defined and designated as specified in the Resource Lands Sub-element contained in Chapter 5 – Land Use Element.

Cultural Resources

Cultural resources are those items, both tangible and intangible, that provide us with ties to the past, a better understanding of the present, and our hope for what the future might hold. Native Americans, like the Columbia and Wanapum people, have traveled over the landscape that is now Grant County harvesting the roots and plants for food and medicine, taking shelter where the land suited them. Ensuring that a record of their presence is preserved is of concern not only to Native Americans, but to all residents. Preservation of our cultural resources, including archaeological sites and objects, traditional cultural lands, food gathering areas, and burial grounds, is important to Grant County's health and prosperity. The goals and policies of this Element serve to preserve and protect significant cultural resources of the County.

Wetlands

Wetlands are fragile ecosystems that serve a number of important beneficial functions.

wetlands assist in the eduction of erosion, siltation, flooding, ground and surface water pollution, and provide wildlife, plant, and fisheries habitat. Wetland destruction or impairment may result in increased public and private costs or property loss.

In Grant County, the wetland environment is predominantly a function of irrigation. The Columbia Basin Project currently irrigates about 660,000 acres. Reservoirs, canals, laterals, and wasteways constructed to serve these irrigated lands have contributed to rising water tables, seep lakes, ponds, and perennial wetlands in nearly all areas of the Project. The Project has provided beneficial wetlands to more than 110,000 acres of naturally drainage-impaired lands. Vegetative growth in such drainage-impaired lands has improved food, cover, and nesting habitats for many wildlife species. These wildlife populations have provided recreational opportunities in the project area for sportsmen.

In Grant County, "wetland" or "wetlands" means area that are inundated or saturated by naturally occurring surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally

created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands. In accordance with the above and the requirements of the Resource Lands and Critical Areas Development Ordinance, the following activities are exempt:

- Operation, maintenance, and construction of Columbia Basin Project-related facilities by the U.S. Bureau of Reclamation as they pertain to the unintentional creation of wetland sites, namely those unintentional wetlands created after 1952 as a result of the Columbia Basin Irrigation Project;

- Ongoing and existing farming and ranching activities such as, but not limited to, (1) grazing, plowing, seeding, cultivating, harvesting for the production of food, (2) construction of facilities in support of farming operations, or (3) upland soil and water conservation practices;

- Maintenance of farm or stock ponds, irrigation ditches, drainage ditches, and farm roads in accordance with best management practices to assure that wetlands and/or their buffers are not adversely impacted;

- Maintenance, repair, operation or minor improvement of existing public streets, highways, or roads within the right-of-way; and

- Maintenance, repair, or operation of existing public utilities and noxious weed control.

In their natural state, wetlands are transitional areas between upland and aquatic environments where water is present long enough to form distinct soils and where specialized "water loving" plants can grow. Wetlands include natural marshy areas along shorelines, inland swamps, and seasonal water courses. Wetlands are typified by a natural water table that usually is at or near the surface, and there may be standing water all or part of the year. Soils that are present in wetlands are known as "hydric soils". Certain plant species, including trees, shrubs, grasses, and grasslike plants have adapted to the low oxygen content of wetland soils. These plants are known as "hydrophytes".

Another distinguishing characteristic of wetlands, in addition to soil type and types of plants present, is the wetness of the soil, or "hydrology" (i.e., how often is the soil saturated or flooded with water and how long does it last?) Indicators of wetland hydrology may include drainage patterns, sediment deposition, watermarks, stream gauge data, flood predictions, historic data, visual observation of saturated soils, or flooded soils.

In their natural state, wetlands perform functions that are impossible or difficult and costly to replace. Wetlands provide erosion and sediment control; the extensive root systems of wetland vegetation stabilize streambanks, floodplains, and shorelines. Wetlands improve water quality by decreasing the velocity of water flow, resulting in the physical interception and filtering of waterborne sediments, excess nutrients, heavy metals, and other pollutants. Wetlands also provide food and shelter, essential breeding, spawning, nesting and wintering habitats for fish and wildlife, including migratory birds, anadromous fish, and other species.

The following references may provide an indication of wetland locations in Grant County. However, these and similar resources were not prepared at a level of detail sufficient to accurately portray the exact location and extent of wetlands in Grant County, and cannot be used in place of an on-site field determination of wetlands. Mapping resources include:

- National Wetland Inventory; and

- Natural Resources Conservation Service soils maps for Grant County, hydric soils designations.

- The Washington State Department of Ecology's Wetland Delineation Manual (most current version) is a required

reference for determining the existence of wetlands.

Aquifer Recharge Areas

Potable water is an essential life-sustaining element. Most of Grant County's potable water comes from groundwater and surface water supplies. Once a potable water source is contaminated, it is difficult, costly, and sometimes impossible to clean up. Preventing contamination is necessary to avoid public costs, hardships, and potential physical harm to people.

As precipitation reaches the earth it can do several things: become part of a snow pack, enter into lakes, streams, rivers, oceans, or wetlands, seep into the soil to be taken up by plant roots, or filter into the ground and become groundwater. The land surface where this filtering process takes place is called an aquifer recharge zone. Aquifer recharge zones warrant special protection from surface pollution to protect the quality of the groundwater in the area. As groundwater moves through the ground it may discharge to surface water features, such as lakes, streams, or rivers, which will in turn recharge the groundwater. The water that remains in the ground makes up the aquifer. Groundwater sometimes flows underground to other locations. Where this is the case, pollution emanating from one area may contaminate the groundwater in another area.

Some areas in Grant County are underlain by soils which are highly permeable and allow surface waters to infiltrate into the ground water. Below the surface, the percolating water enters the geologic layer saturating the aquifer and supplying water in sufficient quantities and quality to be used as a resource. These conditions create aquifer recharge areas. Some of these aquifer recharge areas are highly vulnerable to ground water contamination. Soils, depth to ground water and hydraulic conductivity must all be analyzed to determine their vulnerability.

Ground water is the primary source of drinking water for most rural County residents. All jurisdictions currently depend upon the County's aquifers as their primary source of water. Once ground water is contaminated it is difficult, costly, and often impossible to clean up. Some contaminants like microbial organisms can cause sickness and discomfort while others like organic chemicals, inorganic metals, and radio nuclides can cause neurological disorders, cancer, mutations and even death. The quality of ground water resources used for drinking water in Grant County are generally very good.

Since 1952, groundwater resources of the County have been a complex mixture of naturally occurring State groundwater and artificially stored irrigation water introduced by the Bureau of Reclamation's Columbia Basin Project. Historical records indicate that introducing surface irrigation water to the Columbia Basin's arid lands has significantly affected the groundwater environment beneath the Columbia Basin Project area.

Critical aquifer recharge areas has been defined in Grant County as those areas identified as having a critical recharging effect on aquifer use for potable water in community water systems. Mapping of critical aquifer recharge areas has not been completed by the County.

Frequently Flooded Areas

Frequently flooded areas are defined in Grant County as floodplains or other areas designated as being within a one hundred year floodplain by the Federal Emergency Management Agency's Federal Insurance Rate Maps. The Federal Emergency Management Agency (FEMA) has defined the extent of the 100-year floodplain in order to establish actuarial flood insurance rates and to assist communities in efforts to promote sound floodplain management. Flood plains and other areas subject to flooding (wetlands) perform important hydrologic functions including storing and slowly releasing floodwaters, reducing floodwater velocities, and settling and filtering sediment. Frequently flooded areas provide natural areas and rich agricultural lands. Development in frequently flooded areas diminishes these values and can present a risk to persons and property on the development site and/or downstream from the

development. Building in flood hazard areas also results in additional costs for installing flood protection measures to protect life and property. Additional costs are incurred when flooded property must be repaired.

Flooding is the most commonly occurring natural disaster in Grant County, posing threats to properties, resources, and sometimes even lives. Floods occur when a stream, river, creek or other waterway receives more water than its channel can accommodate. Floods can originate from natural causes such as heavy rainfall or snowmelt. However, human activities such as building may increase the frequency, magnitude and displacement of the flood, hence causing flooding in other areas of a stream.

Within a floodplain, there are flood hazard areas subject to periodic inundation severe enough to result in the loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, or impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. Man often adds to his own losses by building obstructions such as fills, dikes, and levees in a floodplain, thereby causing increased flood heights and velocities. Losses can also be attributed to locating uses in flood-prone areas that are either hazardous to other uses or are themselves vulnerable and not adequately elevated or otherwise protected from flooding.

To limit damage to individuals, property, and natural systems, Grant County requires compliance with the provisions of their Flood Damage Prevention Ordinance, Zoning Ordinance, Shoreline Master Program, Platting and Subdivision Ordinances, and the Short Plat and Short Subdivision Ordinance. The intent of these policies is to promote the efficient use of land and water resources by allocating frequently flooded areas to the uses for which they are best suited. It is also important and necessary to discourage obstructions to floodways, as well as prohibiting uses that pollute or deteriorate natural waters and watercourses. The ordinances are administered through the permitting process for building and development.

The following references may provide an indication of floodplains in Grant County. However, these and similar resources were not prepared at a level of detail sufficient to accurately portray the exact location and extent of floodplains in Grant County, and cannot be used in place of an on-site field determination of floodplains. Mapping resources include:

- FEMA Flood Insurance Rate Maps, September 30, 1988.

Unfortunately, 100-year base flood elevations are not mapped by FEMA for a significant portion of the County (about 95%).

Geologic Hazards

Geologically hazardous areas are defined as "areas that, because of their susceptibility to erosion, sliding, earthquake or other geologic events, are not suited to the siting of commercial, residential or industrial development consistent with public health or safety concerns". When development is sited within these areas, there is a potential threat to the health and safety of citizens. In some cases the risk to development from geological hazards can be reduced or mitigated to acceptable levels by engineering design or modified construction practices. However, when the risks can not be sufficiently mitigated, development needs to be prohibited.

To better understand the particular aspects of the different types of geologic hazards, the following summary descriptions are provided.

Erosion Hazard Areas

Erosion is a common occurrence in Grant County due to hydrologic and geologic characteristics, vegetative conditions, wind and human land use. The County is mantled by soils that were transported by wind or water. These soils are susceptible to additional transport by wind or water, particularly if protective

vegetation is removed or if the soil moisture content is lowered. Generally, area soils have only moderate or low potential for wind or water erosion under adverse conditions of exposure. However, under adverse conditions of exposure, land consisting of soil with high potential for erosion could lose 30 to 40 tons per acre per year to a combination of wind and water erosion. The land could not withstand sustained losses of this magnitude and remain usable for agriculture. Changes in exposure or farming practice or both would be necessary to maintain agricultural production (Bureau of Reclamation).

By minimizing the negative impacts of human land use on these areas, the damage to the natural environment as well as to human-built systems is reduced.

Landslide Hazard Areas (Steep Slopes)

Landslide hazard areas are those areas within Grant County that are subject to potential slope failure. The characteristics of landslide hazard areas include slopes of 15 percent or greater that are underlain by weak, fine grained unconsolidated sediments, jointed or bedded bedrock, or landslide deposits, including the top and toe of such areas. It is necessary to protect the public from damage due to development on, or adjacent to, landslides; preserve the scenic quality and natural character of Grant County's hillsides; and to protect water quality.

Seismic Hazard Areas

Seismic hazard areas are generally associated with active fault areas and earthquakes. While earthquakes cannot be eliminated, there have been no areas of Grant County which have been identified to pose significant, predictable hazards to life and property resulting from the associated ground shaking, differential settlement, and or soil liquefaction. The Department of Agriculture Natural Resource Conservation Service provides soil information indicating areas of risk for liquefaction.

Mine Hazard Areas

Mine hazard areas are defined as "areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts." Mine hazards may also include steep and unstable slopes created by open mines. Because of the geology of Grant County there has been little or no historical subsurface mining that could have left areas honeycombed with abandoned mine tunnels. Similarly, any open mining is required to have both an approved erosion control plan and an approved reclamation plan that will address steep and unstable slopes.

According to the Washington Department of Natural Resources, Division of Geology and Earth Resources, there is a low incidence of landslides or earthquakes in Grant County. The *Washington State Earthquake Hazards* (Information Circular 85) shows that the majority of Grant County is within Seismic Risk Zone 2. The 1991 Edition of the *NEHRP Recommended Provisions for the Development of Seismic Regulations for New Buildings* suggests that Grant County is in an area that has a 10 percent or greater probability of experiencing a maximum horizontal acceleration of 0.1g or greater at a recurrence interval of 250 years.

The U.S. Geological Survey Water-Resources Investigation Report 87-4238 shows thrust-faults along the Saddle Mountains and at the east end of Frenchman Hills. However, Information Circular 85 shows these faults as not being active within the last 10,000 years.

The following references may provide an indication of geologic hazards in Grant County. However, these and similar resources were not prepared at a level of detail sufficient to accurately portray the exact location and extent of geologic hazards in Grant County, and cannot be used in place of an on-site field determination of geologic hazards. Mapping resources include:

- Erosion Hazard Areas: The approximate location and extent of erosion hazard areas can be inferred from tables and mapping included in the Soil Survey of Grant County Washington, 1984, Soil Conservation Service, USDA; and
- Seismic Hazard Areas: The Uniform Building Code Seismic Risk Zone Map of the United States.

Based on the above references, Grant County utilizes a numerical matrix evaluation system to assess the potential for the presence of a geologic hazard.

Fish and Wildlife Habitat

Fish and wildlife habitat areas are important for maintaining species diversity in flora and fauna; providing opportunities for food, cover, nesting, breeding, and movement for fish and wildlife; helping to maintain are and water quality; controlling erosion; and providing separation and visual diversity between urban and rural areas.

Grant County is fortunate to have natural resources encompassing a large variety of environments and supporting a high wildlife species diversity and population. Native plants, fish and wildlife represent important historic, cultural, recreational, and economic resources. Many species serve as indicators of the condition of the environment and the quality of life that Grant County residents have invested in, enjoy and respect.

Many residents and visitors to the area participate in recreational activities that involve wildlife, including hunting, fishing, photography of wildlife, bird watching, and others. Grant County has begun to capitalize on these numerous natural resources through promotion of the area as a recreational paradise, and many of the smaller, more remote communities would like to use recreationally-oriented tourist activities to promote economic development.

Fish and wildlife habitat conservation means land management to maintain species in suitable habitats within their natural geographic distribution so that isolated sub-populations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. To that extent, as well as for the inherent importance of wildlife and the natural environment to the quality of life in Grant County, it is the intent of these policies to recognize the importance of protecting fish and wildlife habitat areas.

Columbia River: All sections of the Columbia River support resident populations of nongame, coldwater, and warmwater game fish. Anadromous salmonids are present only downstream of Chief Joseph Dam on the mid-Columbia River.

In the mid-Columbia River, the majority of juvenile steelhead, sockeye, coho, and spring chinook salmon outmigrate from April through June, whereas juvenile summer and fall chinook salmon undergo a protracted downstream rearing migration from June through August. To enhance and facilitate the downstream migration of juvenile salmonids, a specific volume of water, called the "water budget" is allocated for use during the 60-day period from April 15 to June 15 (Bureau of Reclamation). This streamflow allocation for fisheries protection and enhancement does not vary with the forecast runoff volume; it is shaped to provide the most favorable flow conditions during peak passage times. Grant County PUD, the Northwest Power Planning Council, the Bureau of Reclamation, and other agencies are involved in fish habitat enhancement programs for the Columbia River.

Banks Lake: Banks Lake receives water directly from Roosevelt Lake via pumping and is the irrigation equalizing reservoir for the Columbia Basin Project. Banks Lake supports nongame, warmwater, and coldwater game fish and a valuable, year-round sport fishery, primarily kokanee.

Kokanee spawn in the lake during October and November, with peak spawning around November 1. Banks Lake as operated is favorable to the kokanee life cycle and supports a population sufficient to maintain an active and substantial recreational fishery (Bureau of Reclamation). The Washington Department of Fish and Wildlife supplements the kokanee population with hatchery fry plants.

Potholes Reservoir: Potholes Reservoir was formed in the early 1950s with the completion of

O'Sullivan Dam, and is considered to have the most diverse, well-used fishery in the Columbia Basin. At least ten game fish are known to exist in the reservoir, with yellow perch, black crappie, largemouth bass, bluegill sunfish, walleye, and rainbow trout being the most popular. Rainbow trout are stocked annually in the reservoir, and the other species are self-sustaining (Bureau of Reclamation).

Other Water Bodies: The Bureau of Reclamation and the Washington Department of Fish and Wildlife have investigated the fisheries resources of nearly 200 lakes and 40 streams or stream segments comprising 425 miles of flowing water in the Columbia Basin. Over 40 species are represented. Lakes directly connected to the irrigation system are dominated by yellow perch, whereas rainbow trout dominate the seep lakes indirectly affected by irrigation. Other abundant game fish species in both lake groups include black crappie, laregemouth bass, and pumpkinseed sunfish. The most abundant nongame fish are Tui chub, common carp, and sucker, all of which occur only in lakes directly connected to the irrigation system (Bureau of Reclamation).

Fish and wildlife habitat conservation areas in Grant County are defined in Resource Lands and Critical Areas Development Ordinance No. 93-49-CC as:

1. Areas with which State and Federal endangered and threatened plant and animal and fish species exist, or where State sensitive, candidate and monitor plant and animal and fish species have a primary association;

2. Habitats and species of local and regional importance which include a seasonal range or habitat element with which a given species has a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. These might include areas of high relative density or species richness, breeding and rearing habitat, winter range and movement and/or migration corridors. These might also include habitats that are of limited availability or high vulnerability to alteration such as cliffs, talus, in stream gravel deposits (salmon spawning beds), and wetlands riparian areas. Species of local and regional concern, including those fish and game species of local and regional concern, are those species that are of local and regional concern due to their population status or their sensitivity to habitat manipulation; and

3. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat. These do not include ponds deliberately designed and created from dry sites such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than three years duration) and landscape amenities. However, naturally occurring ponds may include artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority; and

4. Lakes, ponds, streams and rivers planted with game fish, including fish planted under the auspices of federal, state, local or tribal programs or which supports priority fish species as identified by the Department of Fish and Wildlife.

The following references may provide an indication of fish and wildlife habitat conservation areas in Grant County. However, these and similar resources were not prepared at a level of detail sufficient to accurately portray the exact location and extent of habitat areas in Grant County, and cannot be used in place of an on-site field determination of such areas. Mapping resources include:

- Fisheries: Department of Natural Resources base maps for stream types and topography provide an indication of the location of fisheries resources; and

- Wildlife: Department of Fish and Wildlife maps of priority species habitat.

FIRE HAZARDS

Whether wildfire occurs in urban areas, shrub steppe, wheatfields or grasslands, the potential loss to life and property is a concern to both those who fight the fires and whose property may be in harm's way. Much of Grant County receives little natural precipitation and is highly susceptible to fire hazard during much of the year. Meanwhile, more people are moving to previously uninhabited rural areas. As this number increases, the need to provide adequate and efficient fire services to these areas also increases. The goals and policies of this Element address this need by establishing standards that will ensure better fire protection in rural and resource lands of the County.

SHORELINE MASTER PROGRAM

Overview

The shorelines of the state are among the most valuable and fragile of our natural resources and there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. In addition, ever increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in their management and development. Furthermore, much of the shorelines and uplands adjacent thereto are in private ownership. Unrestricted construction on the privately- or publicly-owned shorelines is not in the best public interest; and, therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines while, at the same time, recognizing and protecting private property rights consistent with the public interest. There is, therefore, a clear and urgent demand for a planned, rational and concerted effort, jointly performed by local, state, and federal governments, to prevent the inherent harm in uncoordinated and piecemeal development of our shorelines.

By ratifying Initiative 43B in the 1972 General Election, the people of the state approved the Shoreline Management Act of 1971 (RCW 90.58). This law vests counties and cities with the primary responsibility for comprehensively planning and reasonably regulating shoreline development and use. The goals, shoreline area designations, policies, regulations, and procedures set forth in the shoreline management master program are essential to the protection of the public health, safety and general welfare of the people of Grant County.

Purpose

The purposes of the Master Program are:

- To promote the public health, safety and general welfare by providing long range, comprehensive policies and effective, reasonable regulations for development and use of Grant County shorelines.

- To implement this program in a positive, effective, and equitable manner.

- To further assume and carry out the responsibilities established by the act for Grant County, and to foster by adoption the policy contained in RCW 90.58.020 for shorelines of the state: It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto. The legislature declares that the interest of the people shall be paramount in the management of shorelines of statewide significance. The Department of Ecology, while adopting guidelines for shorelines of statewide significance, shall give preference to uses, in the following order which:

1) recognize and protect the statewide interest over local interest;

2) preserve the natural character of the shoreline;

3) result in long-term over short term benefit;

4) protect the resources and ecology of the shoreline;

5) increase public access to publicly owned areas of the shorelines;

6) increase recreational opportunities for the public in the shoreline;

7) provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end, uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences, ports, and shoreline recreational uses. These recreational uses include, but are not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or their use of the shorelines of the state, and other developments that will provide an opportunity for substantial numbers of people to enjoy shorelines of the state. Permitted uses in the shorelines of the state shall be designed and constructed in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water. Any damage that occurs as a result of permitted uses should be mitigated.

Grant County Shoreline Master Program

The Growth Management Act requires counties with an adopted shoreline master program to include the goals and policies of such program in the county's comprehensive plan. The shoreline master program goals and policies are to be considered an element of the comprehensive plan and the regulations are to be considered a part of the county's development regulations (RCW 36.70A.480). ~~The Grant County Shoreline Master Program was adopted in 1975, and needs revision. Grant County intends to update the Shoreline Master Program after this Plan is adopted. Therefore, rather than include the goals and policies of the 1975 Shoreline Master Program in this Comprehensive Plan, the County adopts the following goals and policies to guide the update of the Shoreline Master Program.~~Grant County completed a revised Shoreline Master Program as required by Chapter 90.58 RCW in 2014. The following goals and policies set forth the guiding principles of the Shoreline Master Program.

Program Goals

In addition to the purpose stated above, the development of the Shoreline Master Program will be guided by the following nine goal statements pursuant to the program elements specified in RCW 90.58.100(2). These goals provide an overall, comprehensive foundation and sense of direction upon which the policies, regulations, shoreline area designations, and administrative procedures will be based. These following goals will provide overall guidance for the management of the shorelines of Grant County:

- ~~**Shoreline Use** – To allow for compatible uses of the shorelines in relationship to the limitations of their physical and environmental characteristics. Such uses should enhance rather than detract from, or~~

~~adversely impact, the existing shoreline environment.~~

- ~~**Conservation** – To preserve, protect, and restore the natural resources of Grant County's shorelines in the public interest and for future generations. These natural resources include but are not necessarily limited to fish, wildlife, vegetation, and natural features found in shoreline regions. Only renewable resources should be extracted and in a manner that will not adversely affect the shoreline environment.~~

- ~~**Public Access** – To provide safe, convenient, properly administered and diversified public access to publicly owned shorelines of Grant County without infringing upon the personal or property rights of adjacent residents. Such access should not have an adverse impact upon the environment.~~

- ~~**Circulation** – To permit safe, adequate, and diversified transportation systems that are compatible with the shorelines, resulting in minimum disruptions to the shoreline environment.~~

- ~~**Economic Development** – To promote and encourage the optimum use of existing industrial and economic areas for users who are shoreline dependent and shoreline related and can harmoniously coexist with the natural and human environments; and, subsequently, to create similar areas as need arises with minimum disruption of the shorelines.~~

- ~~**Recreation** – To encourage the provision and improvement of private and public recreation along the shorelines of Grant County only to the extent that the environment is not impaired or degraded.~~

- ~~**Historical/Cultural/Educational** – To identify, protect, and restore those shoreline areas and facilities that are of historical, cultural or educational value. Public or private organizations should be encouraged to provide public access and protection of such areas and facilities.~~

- ~~**Restoration and Enhancement** – To restore and enhance those shoreline areas and facilities that are presently unsuitable for public or private access and use.~~

- ~~**Implementation Process** – Provide an efficient system for administering shoreline permit applications which would eliminate unnecessary duplication of effort or jurisdictional conflicts, yet assure complete coordination and review. Provide a process to periodically update the inventory, goals, policies, and regulations to achieve responsiveness to changing attitudes and conditions.~~

- An economic development element for the location and design of industries, projects of statewide significance, transportation facilities, port facilities, tourist facilities, commerce and other developments that are particularly dependent on their location on or use of the shorelines of the state;

- A public access element making provision for public access to publicly owned areas;

- A recreational element for the preservation and enlargement of recreational opportunities, including but not limited to parks, tidelands, beaches, and recreational areas;

- A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities, all correlated with the shoreline use element;

- A use element which considers the proposed general distribution and general location and extent of the use on shorelines and adjacent land areas for housing, business, industry, transportation, agriculture, natural resources, recreation, education, public buildings and grounds, and other categories of public and private uses of the land;

- A conservation element for the preservation of

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natural resources, including but not limited to scenic vistas, aesthetics, and vital estuarine areas for fisheries and wildlife protection;

- An historic, cultural, scientific, and educational element for the protection and restoration of buildings, sites, and areas having historic, cultural, scientific, or educational values;

- An element that gives consideration to the statewide interest in the prevention and minimization of flood damages; and

Shorelines of Statewide Significance

The Washington State legislature designated certain shorelines as shorelines of statewide significance from which all of the people of the state derive benefit and that these shorelines should, therefore, be managed with the interest of all of those people in mind. The Act requires that the Mater Program give preference to uses and developments that are consistent with the principle of statewide over local interest. The legislature determined that in order to fulfill the goal of statewide public interest in shorelines of statewide significance, local Master Programs shall give preference to uses that are consistent with the policies applied in the following order, pursuant to RCW 90.58.020:

1. The statewide interest should be recognized and protected over the local interest.

2. The natural character of shorelines of statewide significance should be preserved.

3. Uses of shorelines of statewide significance should result in long term benefits to the people of the state.

4. The natural resources and ecological systems of shorelines of statewide significance should be protected.

5. Public access to publicly owned areas in shorelines of statewide significance should be increased.

6. Recreational opportunities for the public should be increased on shorelines of statewide significance.

GOALS AND POLICIES

Goals and policies follow the shared vision for the future of Grant County for sustaining and improving our quality of life. Goals and policies are also consistent with the Planning Goals of the Growth Management Act. Goals are broad statements of a community's aspirations. Policies express a commitment to a course of action. Policies provide overall direction for implementation of a strategy. Policies provide clear guidance for decision-making subject to this Plan, and form the basis for development regulations. Goals and policies do not apply to incorporated cities, but rather, only to unincorporated areas of the County, including the unincorporated portions of UGAs.

Following are the goals and policies of the Comprehensive Plan related to the Natural Setting of Grant County.

Resource Lands

Goals and policies related to resource lands are presented in the Resource Lands Sub-element.

Cultural Resources

Goal NS-1: Identify, preserve and protect historic, cultural and archaeological resources found to be significant by recognized local, state or federal processes.

Policies

NS-1.1: Identify known, recorded archaeological, cultural and historic resources.

Action: Obtain a listing of sites in Grant County from the Washington State Office of Archaeology and Historic Preservation, Department of

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Community, Trade and Economic Development .

Action: The County should develop an "Cultural Resource Lands Map and Database" to gather relevant information on cultural, historic and archaeological resource lands into one location and format. The map should show the locations of all Cultural Resource Lands and relate to an OAHP database and the Grant County Assessor database.

Action: The County should establish a Cultural Resource Task Force comprised of citizens, Wanapum Band, OAHP, DNR, other state agency, Grant County PUD, city and County representatives to develop inventories of significant and potentially significant sites.

NS-1.2: Develop a local process for evaluating the significance of historic, cultural, and archaeological resources.

NS-1.3: Preserve areas that contain valuable historical or archaeological sites of Federal, State, tribal, or local significance. Maintain and enforce provisions to the Resource Lands and Critical Areas Ordinance requiring conditioning of project approval on findings made by a professional archaeologist for development activities on sites of known cultural, historical or archaeological significance.

NS-1.4: Prior to demolition, moving, or alteration to any designated historic, cultural, and archaeological landmark, ensure that due consideration is given to its preservation or, at a minimum, documentation of its historic, cultural or archaeological value.

Critical Areas

Goal NS-2: Wetlands should be protected because they provide important functions that add to the quality of life.

Policies

NS-2.1: Wetland areas should be identified by the development applicant and reviewed by the County prior to development. If a wetland is determined to exist on a parcel subject to a non-exempt development activity, a written delineation should be required of the applicant.

NS-2.2: The County should consider accepting written determinations, delineations and mitigation plans only from the U.S. Army Corps of Engineers, the Department of Ecology, the Natural Resources Conservation Service, or a qualified critical areas professional. The County should consider requiring that mitigation plans for unavoidable wetland impacts to be based on a wetland functional assessment.

NS-2.3: Based on their quality demonstrated by the classification system defined in the Resource Lands and Critical Areas Ordinance, wetlands should be protected from alterations due to land use changes that may create adverse impacts to the wetland.

NS-2.4: The County should consider incorporation of the Washington State Wetlands Rating system for Eastern Washington (Ecology Publication #91-58) into the classifications system adopted in the Resource Lands and Critical Areas Ordinance.

NS-2.5: The County should consider incorporation of the Washington State Department of Ecology Manual titled "Washington State Wetlands Identification and Delineation Manual, March 1997" into the classifications system adopted in the Resource Lands and Critical Areas Ordinance.

NS-2.6: Whenever feasible, innovative techniques that enhance a wetland and promote it as a useful, functioning part of the development will be encouraged.

NS-2.7: Wetland preservation strategies and efforts, including wetland banking, should be coordinated with appropriate local, state and federal agencies and private conservation organizations to take advantage of both technical and financial assistance and to avoid duplication of efforts.

Goal NS-3: Areas demonstrated to be critical aquifers and/or which play a crucial role in recharging our groundwater supplies should be carefully monitored and policies and regulations developed to protect potable water sources.

Policies

NS-3.1: Critical groundwater supply areas, aquifer recharge areas, and areas with a high groundwater table and/or unconfined aquifers that are used for potable water should be identified.

NS-3.2: The establishment of land use intensity limitations based on the availability of sanitary sewers should be encouraged. Cluster developments are encouraged because of the potential for shared community sewage disposal systems instead of dispersed individual septic systems.

NS-3.3: Agricultural activities, including commercial and hobby type, are encouraged to incorporate best management practices concerning waste disposal, fertilizer use, pesticide use, and stream corridor management.

NS-3.4: Fertilizer and pesticide management

practices of schools, parks, golf courses and other recreational or institutional facilities that maintain large landscaped areas should be evaluated at the time of development in relation to best management practices (BMPs) as recommended by the Cooperative Extension Service. Existing facilities are strongly encouraged to also incorporate these BMPs.

NS-3.5: It is the responsibility of the developer to prove that their proposal would not adversely affect the recharge of an aquifer.

NS-3.6: Within aquifer recharge areas, short and long subdivisions and other divisions of land will be evaluated for their impact on groundwater quality.

NS-3.7: Development that could substantially and negatively impact the quality of an aquifer should not be allowed unless it can be demonstrated that these negative impacts can be overcome.

NS-3.8: The installation of underground fuel or storage tanks within a known critical recharge area should be prohibited. Installation in any other areas will be subject to applicable federal, state and local regulations.

Goal NS-4: Frequently flooded areas that are known to be critical parts of the natural drainage system should be protected by adopting policies and regulations to prevent potential alterations and obstructions to those areas.

Policies

NS-4.1: Frequently flooded areas should be identified as such and mapped.

NS-4.2: The natural flood storage function and fish and wildlife habitat functions and values of floodplains should be preserved where practicable.

NS-4.3: One hundred year floodplains should be protected by locating roads and structures above the one hundred year level. Where filling is allowed, development shall be required to mitigate for existing flood storage capacity and fish and wildlife habitat lost to filling.

NS-4.4: Growth and development patterns compatible with natural drainage features should be encouraged, and alteration of natural drainage features should be discouraged.

NS-4.5: Control of erosion at its source as a means of controlling water pollution, flooding, and habitat damage downstream should be encouraged.

NS-4.6: Development in frequently flooded areas that pose a threat to human health and property by reason of flooding, unsanitary conditions, or other hazards, should be limited and/or mitigated.

NS-4.7: The County may consider adoption of a drainage ordinance that directs land development activities to make provisions for control of surface water discharge impacts to human health and safety and habitat.

Goal NS-5: Appropriate measures should be provided to either avoid or mitigate significant risks to public and private property and to public health and safety that are posed by geologic hazard areas.

Policies

NS-5.1: When probable significant adverse impacts from geologically hazardous

areas are identified during the review of a development application, documentation which fully addresses these potential impacts and identifies alternative mitigation measures to eliminate or minimize the impacts should be required.

NS-5.2: Grading and clearing for both private developments and public facilities or services should be limited to the minimum necessary to accomplish engineering design, with reclamation of disturbed areas being a top priority.

NS-5.3: To minimize blowing soil during development, appropriate water and mulch material should be required on any areas without a vegetative cover, as indicated in an approved erosion control plan.

NS-5.4: To maintain the natural integrity of landslide hazard areas and to protect the environment, and the public health and safety, an adequate buffer of existing vegetation should be maintained around all sides of the landslide hazard areas.

NS-5.5: Development on steep slopes should be designed to prevent property damage and environmental degradation.

NS-5.6: In areas subject to erosion, native ground cover should be retained or replaced after construction, special construction practices should be used, and allowable site coverage may need to be reduced to prevent erosion and sedimentation. Limitations on the time when site work can be done may also be appropriate.

Goal NS-6: Fish and wildlife habitat areas should be protected as an important natural resource, particularly in regard to their functions and economic, aesthetic and quality of life values.

Policies

NS-6.1: Critical fish and wildlife habitat conservation areas within the County should be identified as such.

NS-6.2: The impacts of new development on the quality of land, wildlife and vegetative resources should be considered as part of the environmental review process. Any appropriate mitigating measures should be required. Such mitigation may involve the retention and/or enhancement of habitats.

NS-6.3: The preservation of blocks of habitat and the connections between them, as well as the restoration of lost and damaged fish habitat, should be encouraged.

NS-6.4: Proper riparian management that maintains existing riparian habitat and is consistent with best agricultural management practices should be encouraged.

NS-6.5: Land uses adjacent to naturally occurring water bodies and other fish and wildlife habitat areas should not negatively impact the habitat areas. If a change in land use occurs, adequate buffers should be provided to the habitat areas.

NS-6.6: Activities allowed in fish and wildlife habitat conservation areas and open space should be consistent with the species located there, and in accordance with all applicable state and federal regulations and/or best management practices for the activity regarding that species.

Water Resources

Goal NS-7: Privately-held certificates of water right should be recognized as an important natural resource and protected,

to the extent practicable, through County planning decisions which encourage continued use for rural activities.

Goal NS-8: Development should be conducted so as to protect surface and ground water quality and habitat, prevent chronic flooding from stormwater runoff, maintain natural stream hydrology, and protect aquatic resources.

Policies

NS-8.1: The County should attempt to limit potential damage, dangers, or public costs associated with inappropriate land development by reasonable regulation of and application of uniform surface water and erosion control standards.

NS-8.2: New development activities, including site designs and construction practices, should make provisions for surface water and erosion and sedimentation control during and after construction.

NS-8.3: Consistent and appropriate implementation of physical aspects of land alteration should be encouraged.

NS-8.4: Land uses compatible with the preservation of natural vegetation should be encouraged.

NS-8.5: Public improvements and private developments should not alter natural drainage systems without acceptable mitigating measures which limit the risk of flooding or negative impacts to water quality.

NS-8.6: Natural surface water storage sites that help regulate streamflows and/or recharge groundwater should be preserved and their water quality protected.

NS-8.7: Surface water runoff from development adjacent to steep slopes, ravines, or bluffs should be routed so it does not cause erosion or landslides. Runoff should be sufficiently diffused so that flows do not create erosion.

NS-8.8: Natural stream channels should be preserved, protected, and enhanced for their hydraulic, ecological, and aesthetic functions through development regulations, land dedications, easements, acquisition and other means.

Fire Hazards

Goal NS-9: Protect life and property in rural and resource areas of the County from fire hazards.

Policies

NS-9.1: The County should prepare an implementation plan for fire safety and prevention for rural and resource lands and presenting development standards.

Action: The County should establish a Fire Hazards Task Force comprised of citizens, fire district, city and county building officials, corporations, agricultural, DNR, other state agency, city and County representatives to develop a fire safety and prevention plan similar to that prepared for Kittitas County.

Shoreline Management

Protecting Grant County's shoreline environment is of importance to preserving the economic, environmental and cultural resources of our community. The shoreline policies that follow have been crafted to recognize these unique and valuable shoreline resources and to protect them for the benefit of future

generations. These policies are intended to be consistent with the Shoreline Management Act, Chapter 90.58 RCW.

Economic Development Element

Goal A: Support water-oriented uses to maximize the positive economic imct of tourism and recreational development.

Goal B: Preserve existing agricultural industry with sensitivity to the environment and aesthetic character that incorporate low impact technologies and provide opportunities for public enjoyment of the shoreline.

Goal C: Promote economic growth that conserves natural resources and open spaces, maintains environmental quality and rural character.

General Economic Development Policies:

1. Ensure healthy, orderly economic growth by allowing those economic activities which will be an asset to the local economy, and for which the adverse effects on the quality of the shoreline and surrounding environment can be mitigated.
2. Develop, as an economic asset, the recreation and tourism industry along shorelines in a manner that will enhance public enjoyment.
3. Give preference to economic activities which either leave natural or existing shoreline features such as trees, shrubs, grasses and wildlife habitat unmodified, or which modify them in a way which enhances human awareness and appreciation of the shoreline and other natural and non-natural surroundings. Prohibit the introduction of invasive plant species along shorelines, and encourage the removal of noxious and invasive weeds and trees.
4. Encourage new water-dependent, water-related, and water-enjoyment economic development in priority order.
5. Ensure that any economic activity taking place along the shorelines operates without causing irreparable harm to the quantity of the site's environment or adjacent shorelands.
6. Where possible, developments are encouraged to incorporate low impact development techniques into new and existing projects and integrate architectural and landscape elements that recognize the river environment.
7. Require non-water-oriented commercial or recreational development provide for ecological restoration and public access as appropriate

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8. Assure that commercial and agricultural uses will not result in a net loss of shoreline ecological functions or have significant adverse impacts on navigation, recreation and public access

Commercial Development Policies:

1. Promote water-oriented commercial uses in shoreline areas that support recreation and tourism.

Agricultural Development Policies:

1. Maintain current agricultural uses as a major economic strength of the County.
2. Protect current agricultural land uses of long-term commercial significance and provide for development of new agricultural uses for which adverse environmental effects can be mitigated.

Public Access and Recreation Element

Goal A: Implement a public access system that increases the amount and diversity of public access consistent with private property rights, public safety and the natural shoreline character.

Goal B: Provide opportunities and space for diverse forms of water-oriented recreation in Grant County shoreline.

Policies:

1. Ensure that developments, uses, and activities on or near the shoreline do not impair or detract from the public's access to the water. Where practicable, public access to the shoreline should be enhanced (Existing SMP policy (5)(A)).
2. Design public access such that they provide for public safety and minimize potential impacts to private property and individual privacy (Existing SMP policy (5)(B)).
3. Locate, design, manage and maintain public access and recreation facilities in a manner that protects shoreline ecological functions and processes and the public health and safety.
4. Encourage federal, state and local governments to enhance existing shoreline properties in Grant County for public access and recreational.
5. Identify opportunities for public access on publicly owned shorelines. Preserve, maintain and enhance public access afforded by shoreline street ends, public utilities and rights-of-way.
6. Provide physical and visual public access in the shoreline jurisdiction in association with the following uses when feasible: residential developments with five or more dwellings; commercial development; and public agency recreational development.

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7. Provide public access and interpretive displays as part of publicly funded restoration projects where significant ecological impacts are addressed.
8. Allow for passive and active shoreline recreation that emphasizes location along shorelines in association with the County's and other public agencies' parks, recreation, wildlife habitat and open space plans.
9. Encourage a variety of compatible recreational experiences and activities to satisfy the County's diverse recreational needs.
10. Give water-dependent recreation priority over water-enjoyment recreation uses. Give water-enjoyment recreational uses priority over non-water-oriented recreational uses
11. Integrate and link recreation facilities with linear systems, such as walking trail, bicycle paths, easements, and scenic drives when feasible.
12. Promote non-intensive recreational uses which avoid adverse effects to the natural and Columbia Basin Project-enhanced hydrology of aquatic systems, do not contribute to flood hazards, and avoid damage to the shoreline environment through modifications such as structural shoreline stabilization or native vegetation removal.

Circulation Element

Goal A: Implement multi-modal transportation improvements that provide for mobility and access and that minimize adverse impacts on the shoreline environment.

Policies:

1. Provide safe, reasonable, and adequate circulation systems to shorelines where routes will minimize adverse effects on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline (Existing SMP policy (3)(A))
2. Within the shoreline jurisdiction, locate land circulation systems that are not shoreline oriented as far from the land-water interface as practicable to reduce interference with either natural shoreline resources or other appropriate shoreline uses (Existing SMP policy (3)(B))
3. Allow for maintenance and improvements to existing roads and parking areas. Allow for necessary new roads and parking areas where other locations outside of shoreline jurisdiction are not feasible.
4. Plan and develop a circulation network which is compatible with the shoreline environment, and respects and protects ecological and aesthetic values in the shoreline of the state as well as private property rights.
5. Include in circulation system for pedestrian, bicycle, equestrian and public transportation where

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appropriate. Circulation planning and projects should support existing and proposed shoreline uses that are consistent with the SMP.

6. Promote existing transportation corridors for reuse for water-dependent uses or public access when they are abandoned.
7. Encourage relocation or improvement of those circulation elements that are functionally or aesthetically disruptive to the shoreline, public waterfront access, and ecological functions.
8. Plan parking to achieve optimum use. Where possible, parking should serve more than one use (e.g. serving recreational use on weekends, commercial uses on weekdays).
9. Encourage low-impact parking facilities, such as those with permeable pavements and bio-swales.
10. Encourage trail and bicycle paths along shorelines in a manner compatible with the natural character, resources, and ecology of the shoreline.
11. Encourage the linkage of shoreline parks, recreation areas, and public access points with linear systems, such as hiking paths, bicycle paths, easements and/or scenic drives.

Shoreline Uses and Modifications Element

Goal A: Encourage shoreline development that recognizes Grant County's natural and cultural values and its unique aesthetic qualities offered by its variety of shoreline environment

Goal B: Grant County recognizes and protects the functions and values of the shoreline environments of statewide and local significance. For shorelines of state-wide significance (SSWS), protection and management priorities are to:

1. Recognize and protect the state-wide interest over local interest;
2. Preserve the natural character of the shoreline;
3. Provide long-term over short-term benefit;
4. Protect the resources and ecology of shorelines;
5. Increase public access to publicly owned areas of shorelines; and
6. Increase recreational opportunities for the public in shoreline areas.

General Policies:

1. Maintain areas within the shoreline jurisdiction with unique attributes for specific long-term uses, including agricultural, commercial, industrial, residential, recreational and open space uses.
2. Ensure that proposed shoreline uses are distributed, located and developed in a manner that will maintain or improve the health, safety and welfare of the public when such uses occupy shoreline areas.
3. Ensure that activities and facilities are located on the shorelines in such a manner

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as to retain or improve the quality of the environment.

4. Ensure that proposed shoreline uses do not infringe upon the rights of others, upon the rights of private ownership, upon the rights of the public under the Public Trust Doctrine or federal navigational servitude, and treaty rights of Indian tribes.

5. Minimize the adverse impacts of shoreline uses and activities on the environment during all phases of development (e.g. design, construction, management and use).

Shoreline Environment Designation Policies:

1. Provide a comprehensive shoreline environment designation system to categorize Grant County's shorelines into environments based upon the primary characteristics of shoreline areas to guide the use and management of these areas.

2. Designate properties as Natural in order to protect and restore those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions that are sensitive to potential impacts from human use. Natural areas should be managed consistent with the policies in Section 24.12.120.

3. Designate properties as Shoreline Residential to accommodate higher-density residential development and recognize existing and proposed land uses. This designation is appropriate for residential uses on lands with zoning classifications for detached and attached residential.

4. Assign appropriate environment designation for agricultural land uses of long-term commercial significance for which adverse environmental effects can be mitigated.

5. Assign appropriate environment designations for preservation of wildlife habitat area, natural resources and public agency operations.

6. Designate properties within each environment designation based on the designation criteria in SMP Section II, Article II.

Agriculture Policies:

1. This Program recognizes the importance of agriculture in Grant County and supports its continued economic viability. This Program allows for ongoing agricultural activities and should protect agricultural lands from conflicting uses such as intensive or unrelated residential, industrial or commercial uses, while also maintaining shoreline ecological functions and processes.

2. New agricultural development should be conducted in such a manner

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as to assure no net loss of shoreline ecological functions and processes.

3. Maintain a vegetative buffer between agricultural lands and water bodies or wetlands

4. Conversion of agricultural uses to other uses should comply with all policies and regulations for non-agricultural uses.

Aquaculture Policies:

1. Aquaculture is a water-dependent use and, when consistent with control of pollution and avoidance of adverse impacts to the environment and preservation of habitat for resident native species, is a preferred use of the shoreline (WAC 173-26-241(3)(b)).

2. Give preference to aquaculture operations that minimize environmental impacts through use of fewer visible structures or less extensive substrate and vegetation modifications.

3. Aquaculture should not be allowed in areas where it would degrade water quality, result in a loss of shoreline ecological function, impair navigation, or conflict with other water-dependent uses.

4. Design aquaculture facilities to minimize nuisance odors and noise, as well as visual impacts on surrounding shoreline development.

5. The rights of treaty tribes to aquatic resources within their usual and accustomed areas should be addressed through the permit review process. Direct coordination between the applicant/proponent and the tribe should be encouraged.

Boating Facilities Policies:

1. Locate and design boating facilities so that their structures and operations will be compatible with the area affected, such as environmental conditions, shoreline configuration, access, and neighboring upland and aquatic uses.

2. Require restoration activities when substantial improvements or repair to existing boating facilities is planned.

3. Boating facilities that minimize the amount of shoreline modification are preferred.

4. Boating facilities should provide physical and visual public shoreline access and provide for multiple use, including water-related use, to the extent compatible with shoreline ecological functions and processes and adjacent shoreline use.

5. Boating facilities should be located and designed to avoid adverse effects upon riverine, and nearshore processes such as erosion, littoral or riparian transport, and accretion, and,

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should where feasible, enhance degraded, scarce, and/or valuable shore features including accretion shoreforms.

6. Location and design of boating facilities should not unduly obstruct navigable waters and should avoid adverse effects to recreational opportunities such as fishing, shellfish gathering, pleasure boating, commercial aquaculture, swimming, beach walking, picnicking and shoreline viewing.

Breakwaters, Jetties, Groins and Weirs Policies:

1. To the extent feasible, limit the use of breakwaters, jetties, groins, weirs or other similar structures to those projects providing ecological restoration or other public benefits. These structures should avoid and minimize significant ecological impacts. Impacts which cannot be avoided should be mitigated.

Dredging and Dredge Material Disposal Policies:

1. Dredging and dredge material disposal should avoid and minimize significant ecological impacts. Impacts which cannot be avoided should be mitigated.

2. Design and locate new shoreline development to avoid the need for dredging.

3. Limit dredging and dredge material disposal to the minimum necessary to allow for shoreline restoration, flood hazard reduction, and maintenance of existing legal moorage and navigation. Dredging to provide for new navigation uses is prohibited.

4. Allow dredging for the primary purposes of flood hazard reduction only as part of a long-term management strategy consistent with an approved flood hazard management plan.

5. Ensure that dredging operations are planned and conducted in a manner that will minimize interference with navigation and that will lessen adverse impacts to other shoreline uses

Fill Policies:

1. Limit fill waterward of the OHWM to support ecological restoration or to facilitate water-dependent or public access uses.

2. Allow fill consistent with floodplain regulations upland of the OHWM provided it is located, designed and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration, and is the minimum necessary to implement an approved project.

In-Stream Structures Policies:

1. Locate, plan and permit in-stream structures only when consistent with the full range

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of public interests, ecological functions and processes, and environmental concerns, with special emphasis on protecting and restoring priority habitats and species.

Mining Policies:

1. Locate mining facilities outside shoreline jurisdiction whenever feasible.
2. Do not allow mining in any location waterward of the OHWM.
3. Design and locate mining facilities and associated activities to prevent loss of ecological function. Give preference to mining uses that result in the creation, restoration, or enhancement of habitat for priority species.
4. Protect water bodies from sources of pollution, including but not limited to, sedimentation and siltation, chemical and petrochemical use, and spillage and storage/disposal of mining wastes and spoils
5. Mining operations should be located, designed, and managed so that other appropriate uses are not subjected to substantial or unnecessary adverse impacts from noise, dust or other effects of the operation. The operator may be required to implement measures such as buffers, limited hours, or other mitigating measures for the purpose of minimizing adverse proximity impacts.

Private Moorage Facilities Policies:

1. Moorage associated with a single family residence is considered a water-dependent use provided that it is designed and used as a facility to access watercraft, and other moorage facilities are not available or feasible. Moorage for water-related and water enjoyment uses or shared moorage for multifamily use should be allowed as part of a mixed use development or where it provides public access.
2. New moorage, excluding docks accessory to single family residences, should be permitted only when the applicant/proponent has demonstrated that a specific need exists to support the intended water-dependent or public access use.
3. As an alternative to continued proliferation of individual private moorage, mooring buoys are preferred over docks or floats. Shared moorage facilities are preferred over single user moorage where feasible, especially where water use conflicts exist or are predictable. New subdivisions of more than two (2) lots and new multifamily development of more than two (2) dwelling units should provide shared moorage where feasible.

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4. Docks, piers and mooring buoys, including those accessory to single family residences, should avoid locations where they will adversely impact shoreline ecological functions or processes, including currents and littoral drift.

5. Moorage should be spaced and oriented in a manner that minimizes hazards and obstructions to public navigation rights and corollary rights thereto such as, but not limited to, fishing, swimming and pleasure boating, as well as private riparian rights of adjacent land owners.

6. Moorage should be restricted to the minimum size necessary to meet the needs of the proposed use. The length, width and height of piers and docks should be no greater than that required for safety and practicality for the primary use.

7. Pile supports are preferred over fills because piles do not displace water surface or aquatic habitat and are removable and thus more flexible in terms of long term use patterns. Floats may be less desirable than pile structures where aquatic habitat or littoral drift are significant.

8. The use of buoys for small craft moorage is preferred over pile or float structures because of lesser long term impact on shore features and users; moorage buoys should be placed as close to shore as possible to minimize obstruction to navigation.

9. Piers and docks should be constructed of materials that will not adversely affect water quality or aquatic plants and animals in the long term.

10. New pier and dock development should be designed so as not to interfere with lawful public access to or use of shorelines. Developers of new piers and shared moorage should be encouraged to provide physical or visual public access to shorelines whenever safe and compatible with the primary use and shore features.

Recreational Development Policies:

1. Shoreline recreational development should be given priority for shoreline location to the extent that the use facilitates the public's ability to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline. Where appropriate, such facilities should be dispersed along the shoreline in a manner that supports more frequent recreational access and aesthetic enjoyment of the shoreline for a substantial number of people.

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2. Recreational developments should facilitate appropriate use of shoreline resources while conserving them. These resources include, but are not limited to: accretion shoreforms, wetlands, soils, ground water, surface water, native plant and animal life, and shore processes.

3. Recreational facilities should be a combination of active and passive types. Location of such facilities should consider the ecological function and sensitive nature of the shorelines in order to avoid adverse impacts. For example, wildlife and habitat preservation areas with sensitive nature of shoreline should have low impact recreational uses.

4. Recreational developments and plans should provide the regional population a varied and balanced choice of recreation experiences in appropriate locations. Public agencies should coordinate their plans and activities to provide a wide variety of recreational opportunities without needlessly duplicating facilities.

5. Encourage the linkage of shoreline parks, recreation areas, and public access points with linear systems, such as hiking paths, bicycle paths, easements and/or scenic drives.

6. When feasible, recreation facilities should incorporate public education regarding shoreline ecological functions and processes, the role of human actions on the environment and the importance of public involvement in shorelines management. Opportunities incorporating educational and interpretive information should be pursued in design and operation of recreation facilities and nature trails.

7. Locate and design recreational developments to preserve, enhance, or create scenic views and vistas in accordance with Section 24.12.260, Public Access.

Residential Development Policies:

1. Consider single-family residential development as a priority use only when developed in a manner consistent with the control of pollution and prevention of damage to the natural environment.

2. Locate and construct residential development in a manner that assures no net loss of shoreline ecological functions.

3. Ensure the overall density of development, lot coverage, and height of structures is appropriate to the physical capabilities of the site and consistent with the comprehensive plan.

4. Ensure new residential development provides adequate buffers or open space from the water to protect or restore ecological functions and ecosystem-wide processes, to

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preserve views, to preserve shoreline aesthetic characteristics, to protect the privacy of nearby residences, and to minimize use conflicts.

5. Make adequate provisions for services and infrastructure necessary to support residential development.

6. Design and locate residential development to preserve existing shoreline vegetation, to control erosion, and to protect water quality.

7. Design and locate new residences so that shoreline stabilization will not be necessary to protect the structure. The creation of new residential lots should not be allowed unless it is demonstrated the lots can be developed without:

   (A) Constructing shoreline stabilization structures (such as bulkheads).

   (B) Causing significant erosion or slope instability.

   (C) Removing existing native vegetation within shoreline buffers.

Shoreline Habitat and Natural Systems Enhancement Projects Policies:

1. Include provisions for shoreline vegetation restoration or enhancement, fish and wildlife habitat enhancement, and low impact development techniques in projects located within shoreline jurisdiction, where feasible.

2. Encourage and facilitate implementation of projects and programs included in the Shoreline Master Program Shoreline Restoration Plan.

Shoreline Stabilization Policies:

1. Locate and design new development, including subdivisions, to eliminate the need for new shoreline modification or stabilization.

2. Design, locate, size and construct new or replacement structural shoreline stabilization measures to minimize and mitigate the impact of these modifications on the County's shorelines.

3. Give preference to non-structural shoreline stabilization measures over structural shoreline stabilization, and give preference to soft structural shoreline stabilization over hard structural shoreline stabilization.

4. Allow location, design, and construction of riprap and other bank stabilization measures primarily to prevent damage to existing development or to protect the health, safety and welfare of Grant County residents.

5. Encourage fish-friendly shoreline design during new construction and redevelopment by offering incentives and regulatory flexibility.

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Utilities Policies:

1. Allow for utility maintenance and extension with criteria for location and vegetation restoration as appropriate.
2. Plan, design, and locate utility facilities to minimize harm to shoreline functions, preserve the natural landscape, and minimize conflicts with present and future planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.
3. Do not permit new non-water-oriented primary utility production and processing facilities, or parts of those facilities, such as power plants, solid waste storage or disposal facilities within shoreline jurisdiction unless no other options are feasible. Primary utility facilities, such as wastewater treatment plants and including expansion of existing facilities, should be located in shoreline jurisdiction only if no practical upland alternative or location exists. Such facilities and expansions should be designed and located to minimize impacts on shoreline ecological functions, including riparian and aquatic areas, and to the natural landscape and aesthetics. Public health and safety should be the highest priority for the planning, development and operation of primary utility facilities.
4. Locate utility transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, outside of shoreline jurisdiction where feasible. Where permitted within shoreline jurisdiction, such facilities should be located within existing or approved road crossings, right-of-way and corridors or in such a way as to minimize potential adverse impacts on shoreline areas. Joint use of rights-of-way and corridors in shoreline areas should be encouraged.
5. Locate new utility facilities so as not to require extensive shoreline protection works.
6. Locate utility facilities and corridors to protect scenic views from public parks and trails. Whenever possible, such facilities should be placed underground, or alongside or under bridges.
7. Design utility facilities and rights-of-way to preserve the natural landscape and to minimize conflicts with present and planned land uses.

Existing Uses Policies:

1. Allow nonconforming existing legal uses and structures to continue in accordance with this SMP. Residential structures and appurtenant structures that

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were legally established and are used for a conforming use, but that do not meet standards for the following should be considered a conforming structure: setbacks, buffers, or yards; area; bulk; height; or density.

2. Allow alterations of nonconforming structures, uses, and lots in consideration of historic development patterns, when occupied by preferred uses, and when consistent with public safety and other public purposes.

3. Encourage transitions from nonconforming uses to conforming uses.

4. Allow for nonconforming structures to expand when they do not increase the nonconformity according to SMP requirements.

5. Allow for existing roads, driveways and utility lines to continue and expand when they do not increase the nonconformity according to SMP requirements.

6. Consider the no-net-loss of ecological function objective to guide review of proposed expansions or other changes to nonconforming uses and new development on nonconforming vacant lots. This objective may be addressed in an area-wide manner consistent with the SMP cumulative impacts analysis.

Conservation Element

Goal A: Protect the natural and Columbia Basin Project-enhanced hydraulic, hydrologic and habitat functions, scenic as well as recreational values of Grant County's shorelines.

1. Policies:

2. Develop and implement management practices that will ensure a sustained yield of renewable resources of the shorelines while preserving, protecting, enhancing and restoring unique and nonrenewable shoreline resources, environments, or features

3. Reclaim and restore areas that are biologically and aesthetically degraded to the greatest extent feasible

4. Preserve scenic vistas, aesthetics, fisheries and wildlife habitat, and other critical areas

5. Protect shoreline processes and ecological functions through regulatory and non-regulatory means that may include acquisition of key properties, conservation easements, regulation of development within shoreline jurisdiction, and incentives to private property owners to encourage ecologically sound design and implementation of best land management practices.

6. Protect and manage shoreline-associated wetlands, including maintenance of sufficient

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volumes of surface and subsurface drainage into wetlands, to sustain existing vegetation and wildlife habitat.

7. Work with other jurisdictional agencies in the region and with the private sector to deal effectively with regional and watershed-wide natural environment issues and the protection, preservation, and enhancement of all shorelines as fish and wildlife habitat.

8. Manage development to avoid risk and damage to property and loss of life from geological conditions.

9. Regulate development within the 100-year floodplain to avoid risk and damage to property and loss of life

10. Prohibit the introduction of invasive plant species along shorelines, and encourage the removal of noxious and invasive weeds and trees.

11. Protect, enhance, and maintain healthy vegetation consistent with the local climate and nature of shoreline.

12. Enhance and restore areas which are biologically and aesthetically degraded to the greatest extent feasible while maintaining appropriate use of the shoreline.

Historic, Cultural, Scientific, and Educational Resources Element

Goal A: Identify, preserve and protect historic, cultural and archaeological resources found to be significant by recognized local, state or federal processes.

Goal B: Encourage educational and scientific projects and programs that foster a greater appreciation of the importance of shoreline management, water-oriented activities, environmental conservation and local historic connections with Grant County shoreline.

Policies:

1. Identify, protect, preserve, and restore important archeological, historical, and cultural sites located in shorelands.

2. Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime activities, environmental conservation, and maritime history.

3. Prevent public or private uses and activities from destroying or damaging any site having historic, cultural, scientific or educational value without appropriate analysis and mitigation.

Flood Hazard Management Element

Goal A: Protect public safety within rivers' and creeks' floodways and floodplains and protect natural systems by preserving the flood storage function of floodplains.

Policies:

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1. Manage development proposed within floodplains and floodways consistent with the Shoreline Management Act, the Federal Emergency Management Agency (FEMA) standards, the Critical Areas Regulations for frequently flooded areas contained within this SMP.
2. Work with cities and towns, and state and federal agencies to deal effectively with regional flooding issues.
3. Control stormwater runoff in a manner consistent with low impact development practices which utilize natural detention, retention and recharge techniques to the maximum extent possible.
4. Prohibit any development within the floodplain which would individually or cumulatively cause any increase in the base flood elevation beyond FEMA standards.

Private property right Element

Goal A: Recognize and protect private property rights in shoreline uses and developments consistent with the public interest.

Policies:

1. Shoreline uses should be located and designed to respect private property rights, maintain privacy of private property, be compatible with the shoreline environment, protect ecological functions and processes, and protect aesthetic values of the shoreline
2. Public access to shoreline such as trail, bikeways or roads should consider privacy of private property owners when locating them near private properties.

Goal NS 9: The County should recognize and protect the functions and values of the shoreline environments of statewide and local significance. For shorelines of state wide significance (SSWS), protection and management priorities are to:

a. Recognize and protect the state wide interest over local interest;
a. Preserve the natural character of the shoreline;
a. Provide long term over short term benefit;
a. Protect the resources and ecology of shorelines;
a. Increase public access to publicly owned areas of shorelines; and
a. Increase recreational opportunities for the public in shoreline areas.

Policies

NS 9.1: General Shoreline Use:

~~1. Maintain areas within the shoreline jurisdiction with unique attributes for specific long term uses, including agricultural, commercial, industrial, residential, recreational and open space uses.~~

~~2. Ensure that proposed shoreline uses are distributed, located and developed in a manner that will~~

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maintain or improve the health, safety and welfare of the public when such uses occupy shoreline areas.

3. Ensure that activities and facilities are located on the shorelines in such a manner as to retain or improve the quality of the environment.

4. Ensure that proposed shoreline uses do not infringe upon the rights of others, upon the rights of private ownership, upon the rights of the public under the Public Trust Doctrine or federal navigational servitude, and treaty rights of Indian tribes.

5. Minimize the adverse impacts of shoreline uses and activities on the environment during all phases of development (e.g. design, construction, management and use).

NS 9.2: Economic Development:

1. Ensure healthy, orderly economic growth by allowing those economic activities which will be an asset to the local economy, and for which the adverse effects on the quality of the shoreline and surrounding environment can be mitigated.

2. Protect current economic activity (e.g. shipping, marinas, agriculture, etc.) that is consistent with the policies of the SMP.

3. Develop, as an economic asset, the recreation industry along shorelines in a manner that will enhance public enjoyment.

4. Ensure that any economic activity taking place along the shorelines operates without causing irreparable harm to the quantity of the site's environment or adjacent shorelands.

5. Protect current agricultural land uses of long-term commercial significance and provide for development of new agricultural uses for which adverse environmental effects can be mitigated.

NS 9.3: Circulation:

1. Provide safe, reasonable, and adequate circulation systems to shorelines where routes will minimize adverse effects on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

2. Within the shoreline jurisdiction, locate land circulation systems that are not shoreline dependent as far from the land-water interface as practicable to reduce interference with either natural shoreline resources or other appropriate shoreline uses.

NS 9.4: Conservation:

1. Develop and implement management practices that will ensure a sustained yield of renewable resources of the shorelines while preserving, protecting, enhancing and restoring unique and nonrenewable shoreline resources, environments, or features.

2. Reclaim and restore areas that are biologically and aesthetically degraded to the greatest extent feasible.

3. Preserve scenic vistas, aesthetics, and vital estuarine areas for fisheries and wildlife protection.

NS 9.5: Public Access:

1. Ensure that developments, uses, and activities on or near the shoreline do not impair or detract from the public's access to the water. Where practicable, public access to the shoreline should be enhanced.

2. Design public access projects such that they provide for public safety and minimize potential impacts to private property and individual privacy.

NS 9.6: Recreation:

1. Optimize recreational opportunities now and in the future in shoreline areas.

2. Encourage federal, state and local governments to acquire additional shoreline properties in Grant County for public recreational uses.

NS 9.7: Historic/Cultural/Scientific:

1. Identify, protect, preserve, and restore important archeological, historical, and cultural sites located in shorelands.

2. Encourage educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime activities, environmental conservation, and maritime history.

3. Prevent public or private uses and activities from destroying or damaging any site having historic, cultural, scientific or educational value without appropriate analysis and mitigation.

NS 9.8: Wetlands:

1. Preserve and protect natural (non-exempt) wetlands to prevent their loss and degradation.

2. Identify natural (non-exempt) wetlands areas and boundaries according to established identification and delineation procedures.

3. Provide adequate mitigation for disturbance of natural (non-exempt) wetlands and buffers in the shoreline environment.

4. Maintain a wetland buffer zone of adequate width between a natural (non-exempt) wetland and adjacent development to protect the functions and values of the wetland.

5. Base the width of the established buffer zone upon the functions and values of the natural (non-exempt) wetlands.

6. Natural (non-exempt) wetlands that are impacted by activities of a temporary nature should be restored upon project completion.

7. Give preference to in-kind and on-site replacement of wetland functions and values. Where in-kind and/or on-site replacement is not feasible or practical due to the characteristics of the existing wetland or property, mitigation of equal or greater ecological value should be provided off site.

8. Require an applicant to monitor mitigation plans, and to take corrective action if necessary, in order to ensure long-term success of mitigation projects.

9. Develop standards and procedures for wetland banking allowing for approval of wetland mitigation banks on a case-by-case basis until such standards and procedures are adopted.

NS-9.9: Utilities:

1. Require utilities to utilize existing transportation and utility sites, rights-of-way and corridors whenever practicable, rather than creating new corridors in the shoreline environment. Joint use of rights-of-way and corridors in shoreline areas should be encouraged.

2. Locate utility facilities and corridors so as to protect scenic views. Whenever practicable, such facilities should be placed underground or alongside or under bridges.

3. Design utility facilities and rights-of-way to preserve the natural landscape and to minimize conflicts with present and planned land uses.

4. Prohibit solid waste disposal activities and facilities in certain sensitive shoreline areas.

5. Ensure that utilities that are necessary to serve shoreline uses are properly installed so as to protect the shoreline environment and water from contamination.

6. Locate and design utility facilities in a manner that preserves the natural landscape and shoreline ecology, and minimizes conflicts with present and planned land uses.

7. Locate utility features for adequate setback at river crossings so as to allow for natural river meander.

NS-9.10: Vegetation Management:

1. Stress prevention of aquatic weed problems. Where active removal or destruction is necessary, it should be the minimum necessary to allow water-dependent activities to continue. Control activities should minimize negative impacts to native plant communities, and include appropriate disposal of weed materials.

2. Invasive, noxious weeds causing irreparable damage to the shoreline environment should be removed with all due diligence.

NS-9.11: Water Quality:

1. Require developers to locate, design, construct, and maintain shoreline uses and activities to minimize adverse impacts to water quality and fish and wildlife resources.

2. Minimize or mitigate for impacts from agricultural activities such as animal feeding operations, feed lot wastes, retention and storage ponds, manure storage, use of fertilizers and pesticides and other like activities by implementing best management practices.

NS-9.12: Urban Environment:

1. Prioritize the preservation or expansion of existing high-intensity commercial or industrial waterfront centers over the creation of new high intensity industrial or commercial sites.

2. Site industrial or urban development in areas without severe biophysical limitations.

3. Prioritize "water-dependent", "water-related" and "water-enjoyment" uses over other waterfront uses.

4. Ensure that developments within the Urban environment are compatible with uses and activities in adjacent (including aquatic) environments.

NS-9.13: Rural Environment:

1. Protect areas with a high capacity of supporting agricultural or forestry uses from incompatible development.

2. Encourage public and private recreational facilities that are compatible with agriculture and forestry industry.

3. Discourage urban density development.

4. Promote low-density residential development.

5. Allow mineral extraction with sufficient buffers.

6. Require development within the Rural environment to be compatible with uses and activities in adjacent (including aquatic) environments.

NS-9.14: Conservancy Environment:

1. Prohibit or restrict activities and uses that would substantially degrade or permanently deplete the physical or biological resources of the area.

2. Restrict new development to that which is compatible with the natural or biological limitations of the land and water.

3. Prohibit activities or uses that would strip the shoreline of vegetative cover, cause substantial erosion or sedimentation, or adversely affect wildlife or aquatic life.

4. Encourage agricultural and recreational activities that will not be detrimental to the natural shoreline character.

5. Allow single family residential development as a principal use in the conservancy environment.

6. Ensure that developments within the conservancy environment are compatible with uses and activities in adjacent (including aquatic) environments.

NS-9.15: Natural Environment:

1. Restrict or prohibit uses or developments that would significantly degrade the natural value or alter the natural character of the shoreline area.

1. Permit access for scientific, historical, educational and low-intensity recreational purposes, provided that no significant adverse impact on the area will result.

1. Ensure that uses and activities permitted in locations adjacent to shorelines designated natural are compatible and will not compromise the integrity of the natural environment.

2. Ensure that developments within the natural environment are compatible with uses and activities in adjacent (including aquatic) environments.

3. Prohibit commercial and industrial uses other than low-intensity agricultural practices, low-intensity mineral extraction, and commercial forestry.

4. Prioritize preservation of resources over public access, recreation and development whenever a conflict exists.

NS 9.16: Aquatic Environment:

1. Prohibit structures that are not water-dependent and uses that will substantially degrade the existing character of the area.

2. Ensure that developments within the aquatic environment are compatible with the adjoining upland environment.

3. Encourage diverse public access opportunities to water bodies that are compatible with the existing shoreline environment.

NS 9.17: Agriculture:

1. Protect agricultural land of long-term commercial significance from incompatible and preemptive patterns of development.

2. Protect the productivity of the land base by using best management practices to control soil erosion.

3. Maintain a vegetative buffer between agricultural lands and water bodies or wetlands.

NS 9.18: Boating:

1. Locate and design boating facilities so that their structures and operations will be compatible with the area affected.

2. Discourage the use of floating homes and houseboats. They should be allowed only in limited circumstances where their negative environmental impacts can be substantially avoided.

NS 9.19: Commercial Development:

1. Encourage new commercial development on shorelines to locate in those areas with existing, consistent commercial and/or industrial uses and in a manner that will minimize sprawl and the inefficient use of shoreline areas.

2. Encourage commercial development to utilize existing transportation corridors and to minimize the number of ingress/egress points. Ingress/egress should be designed to minimize potential conflicts with, and impact on, regular corridor traffic.

~~***NS 9.20: Flood Hazard:***~~

1. ~~Restrict or prohibit development uses in flood plains that will be dangerous to health, safety or property during flood events.~~

2. ~~Require enhanced construction standards in areas that are vulnerable to flooding.~~

~~***NS 9.21: Industrial:***~~

1. ~~Restrict new industrial lands from being sited on sensitive and ecologically valuable shorelines.~~

2. ~~Encourage new industrial development to provide physical and/or visual access to shorelines.~~

3. ~~Encourage Industrial and Commercial Development within incorporated Urban Growth Areas, Rural Areas of More Intense Development, Major Industrial Developments, lands designated as Commercial and Industrial, and on existing Port-owned and/or operated parcels.~~

~~***NS 9.22: Mining:***~~

1. ~~Protect water bodies from sources of pollution, including but not limited to, sedimentation and siltation, chemical and petrochemical use, and spillage and storage/disposal of mining wastes and spoils.~~

2. ~~Minimize the disruption caused by mining activities so that the natural shoreline systems can function.~~

3. ~~Minimize adverse visual and noise impacts of mining on surrounding shoreline areas.~~

4. ~~Return closed mining sites to as near a natural state as feasible upon closure.~~

~~***NS 9.23: Recreational Development:***~~

1. ~~Locate and design shoreline recreational developments to reflect population characteristics, density and special activity demands.~~

2. ~~Design recreational developments to minimize adverse impacts on the environment.~~

3. ~~Encourage a variety of compatible recreational experiences and activities to satisfy diverse recreational needs.~~

4. ~~Encourage the linkage of shoreline parks, recreation areas, and public access points with linear systems, such as hiking paths, bicycle paths, easements and/or scenic drives.~~

5. ~~Locate and design recreational developments to preserve, enhance, or create scenic views and vistas.~~

6. ~~Locate, design and maintain trails and pathways to protect bank stability.~~

~~***NS 9.24: Residential Development:***~~

1. ~~Permit residential development where there are adequate provisions for utilities, circulation and access.~~

2. ~~Design and locate residential development to preserve existing shoreline vegetation, to control erosion, and to protect water quality.~~

3. ~~Encourage new residential development along the shoreline to cluster dwelling units in order to~~

preserve natural features and minimize physical impacts.

4. Locate residential development so as not to cause significant adverse impacts to forestry, agricultural, or recreational uses.

5. Allow protection of single family residences and appurtenant structures against damage or loss due to shoreline erosion.

NS 9.25: Transportation Facilities:

1. Locate roads to fit the topographical characteristics of the shoreline such that minimum alteration of natural conditions results. New transportation facilities should be located and designed to minimize the need for shoreline protection measures and to minimize the need to modify the natural drainage systems. The number of waterway crossings should be limited as much as possible.

2. Encourage trail and bicycle paths along shorelines where they are compatible with the natural character and ecology of the shoreline.

3. Encourage joint use of transportation corridors within shoreline jurisdiction for utilities and other forms of transportation.

NS 9.26: Shoreline Modification:

1. Allow location, design, and construction of riprap and other bank stabilization measures primarily to prevent damage to existing development or to protect the health, safety and welfare of Grant County residents.

2. New development requiring extensive shoreline stabilization should be discouraged.

3. Locate and design new development to prevent or minimize the need for shoreline stabilization measures and flood protection works.

4. Encourage development of an integrated erosion control strategy that balances structural and non-structural solutions to reduce shoreline damage in an environmentally sensitive manner.

NS 9.27: Dike and Levy:

1. Allow location, design, construction, and maintenance or removal of dikes and levies so that they will not cause significant damage to adjacent properties or valuable resources.

NS 9.28: Dredging:

1. Site and regulate dredging and dredge material disposal in a manner that minimizes adverse effects on natural resources.

2. Ensure that dredging operations are planned and conducted in a manner that will minimize interference with navigation and that will lessen adverse impacts to other shoreline uses.

NS 9.29: Landfill:

1. Allow landfills waterward of OHWM only when necessary to facilitate water-dependent and/or public access uses that are consistent with the master program.

2. Prohibit landfills waterward of OHWM on state-owned shorelands except when in the public interest.

3. Design and locate shoreline fills to minimize damage to existing ecological systems.

4. Design the perimeter of landfills to avoid or minimize erosion and sedimentation impacts. Encourage natural appearing and self-sustaining control methods over structural methods.

NS 9.30: Pier, Dock, Float, and Buoy:

1. Design piers, docks, floats and mooring buoys to cause minimum interference with navigable waters and the public's use of the shoreline.

2. Site and design piers, floats, and docks to minimize possible adverse environmental impacts.

NS 9.31: Salmon Habitat:

1. Lessen impacts of uses, activities, structures, and landfills in salmon habitat, to the maximum extent possible. Significant unavoidable impacts should be mitigated by creating in-kind replacement habitat or other equal benefit where feasible.

2. Minimize the discharge of silt into waterways during in-water and/or upland construction.

NS 9.32: Parking:

1. Locate and design parking facilities to minimize adverse impacts including those related to stormwater runoff and water quality.

NS 9.33: Signage:

1. Design signs such that they do not block or otherwise interfere with visual access to the water of the shorelands.

2. Require that signs in the shoreline environment be linked to the operation of existing uses and attached to said uses.

NS 9.34: Utilities:

1. Require utilities to utilize existing transportation and utility sites, rights-of-way and corridors whenever possible, rather than creating new corridors in the shoreline environment. Joint use of rights-of-way and corridors in shoreline areas should be encouraged.

NS 9.35: Clearing and Grading:

1. Regulate clearing and grading activities in shoreline areas.

2. Avoid negative environmental and shoreline impacts of clearing and grading whenever possible through site planning, construction timing, bank stabilization, and the use of erosion and damage control methods.

3. Design clearing and grading activities with the objective of maintaining natural diversity in vegetation species, age, and cover density.

NS 9.36: Geological Hazard Area:

1. Minimize or mitigate development on unstable or moderately unstable slopes.

2. Avoid clearing vegetation on and within edges of bluffs. Retention of

a natural buffer should be encouraged.

3. Design and construct structures in a manner that provides structural integrity and safety for their useful life.

4. Allow sufficient lot depth within new subdivisions such that bulkheading or other structural stabilization is not necessary.

Fire Hazards

Goal NS 10: Protect life and property in rural and resource areas of the County from fire hazards.

Policies

NS-10.1: The County should prepare an implementation plan for fire safety and prevention for rural and resource lands and presenting development standards.

Action: The County should establish a Fire Hazards Task Force comprised of citizens, fire district, city and county building officials, corporations, agricultural, DNR, other state agency, city and County representatives to develop a fire safety and prevention plan similar to that prepared for Kittitas County.